

**SYMMES ARLINGTON  
CONSERVATION & IMPROVEMENT PROJECT**

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**Neighborhood Protection Plan**

**May 17, 2005**

Symmes Arlington Conservation & Improvement Project  
Neighborhood Protection Plan

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## MISSION STATEMENT

The Neighborhood Protection Plan (the Plan) identifies the parameters of construction operations at the Symmes site and the mitigation measures that Symmes Redevelopment Associates (SRA) will undertake to reduce, as much as is reasonable, the negative impact of the construction process on both the neighborhood and the Arlington community. In addition to local, State and Federal policies that regulate construction projects, the Plan is another layer of protection for the neighborhood and Town.

The Plan is an agreement between the Symmes Redevelopment Associates and the Town of Arlington (Arlington Redevelopment Board and Symmes Neighborhood Advisory Committee). It outlines the methods that SRA's contractor will use in construction to minimize impacts on the surrounding neighborhood, and creates a structure to deal with site conditions and construction activities unknown or not detailed at this time. It also includes methods by which the community can be heard if the expectations created by the Plan are not met.

The neighborhood may expect that procedures stated in the Plan will be followed. The neighborhood may not expect that the construction will be conducted without impact in terms of noise or other inconvenience. While the Plan is a separate layer of protection, local, State and Federal regulations govern many of the contractor's activities at the site, such as demolition, blasting, and disposal of hazardous materials. In almost all cases, these regulations were created to protect the public welfare. To maintain business operations, contractors must comply with a comprehensive system of licenses, reporting and response actions that enforce these regulations.

The Plan is as comprehensive as possible in its consideration of all foreseen construction operations and impacts. Yet, every development project is unique and therefore unforeseen issues will inevitably occur during construction that demand immediate attention and resolution. In general, SRA is committed to providing prior notice to the community regarding construction activities on-site, and to allow for meaningful dialogue regarding potential impacts and mitigation of the same. SRA has developed a Communication Plan (Section 4) to serve as way for the SRA Team and the community to effectively address unanticipated issues and problems as they arise.

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**CONSTRUCTION PLAN**

The Construction Plan includes the schedule, a general description of activities and site logistics for the project. Construction will commence following SRA's receipt of all necessary Town permits (i.e. the Special Permit and the Building Permit). SRA anticipates the residential construction to run for approximately 2 - 2½ years and the Medical Office Building (MOB) construction to run for 6 months - 1 year. SRA developed a preliminary construction plan for both the residential and medical portions of the project:

**Symmes Residential Preliminary Construction Plan\*:**

Phase	Schedule	Location	Activities
1	Approximately 6 - 8 months	Upper Site	Environmental remediation, demolition of Hospital building
		Entire Site	Site work: excavation, blasting, rock processing, grading, stockpiling
		Beginning across from Grove St. on Summer St. and running to the upper site	Gas, sanitary, and storm utilities
		Upper Site	Foundations for Building 3 & 4
2	Approximately 6 - 8 months	Upper Site	Buildings 3 & 4 construction - steel erection, building shell and interior work
		Lower Site	Foundations for Building 2
		Upper Site (across from Vista Park)	Associated Townhouses with Building 3 & 4 - construction
3	Approximately 6 - 8 months	Upper Site	Building 3 & 4 - building shell, interior work, punch list
		Lower Site	Building 2 construction - steel erection, building shell, interior work
		Upper Site (across from Vista Park)	Associated Townhouses with Building 3 & 4 - interior work, punch list
		Upper Site (nearest Woodside Lane)	Townhouses on upper site - construction
		Lower Site	Building 2 punch list
4	Approximately 6 - 8 months	Upper Site	All Townhouses - interior work & punchlist
		Entire Site	Vista Park construction, landscaping & hardscaping

\* This construction plan is preliminary and may change due to issues beyond SRA's control, such as fluctuations in residential market conditions.

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### Medical Office Building Preliminary Construction Plan\*:

Phase	Schedule	Location	Activities
Phase 1	Approximately 1 - 2 months	Old Nurses's Building	Environmental remediation, roof repairs, selected tree clearing and interior demolition
Phase 2	Approximately 6 - 8 months	Existing parking lot adjacent to Old Nurses' Building	Parking Garage - grading, ledge removal, construction, paving
		Old Nurses's Building	Renovation of the existing building & expansion of shell in the back
		Old Nurses's Building	Landscaping and hardscaping

\* The medical office building construction plan is preliminary and may change due to issues beyond SRA's control, such as fluctuations in market demand for medical office space.

The residential project and the MOB project are independent of each other and will occur on different schedules. At this time, SRA has submitted an application for a Special Permit for the MOB. SRA anticipates submitting an application for a Special Permit for the residential project at some point after the Town's 2005 Annual Town Meeting.

Though it cannot be guaranteed, SRA is very committed to do all that is possible to build the MOB and the residential project at the same time. This would significantly help to reduce the development schedule and therefore the intrusion on the neighborhood. In addition, remobilization of the construction team is very costly and would burden the financial viability of both projects. At the conclusion of the Special Permit processes, the Construction Plan and the graphics will be merged into one.

SRA is committed to keeping the neighborhood and Town aware of the construction plan and any changes that may occur. SRA shall conduct meetings with the SNAC, prior to the commencement of any phase of construction, to discuss that phase's specific Construction Plan. At these meetings, SRA shall explain the mitigation measures SRA's construction team will employ to minimize disruption during that phase. Throughout each construction phase, SRA and SNAC shall meet regularly to discuss construction activities and the effectiveness of mitigation measures. (These meetings are further detailed in the Communication Plan.)

The Construction Plan for each phase shall provide a flow-chart schedule for the project with supporting detail that generally describes the major construction activities in each phase (i.e. demolition, foundation work, framing, etc.). A graphic illustration of site logistics for each phase shall also be a part of this Plan.

Given the preliminary Construction Plans outlined above, SRA has completed preliminary graphic illustrations of site logistics plans for each of the residential project's four phases and two for the MOB (following this page).



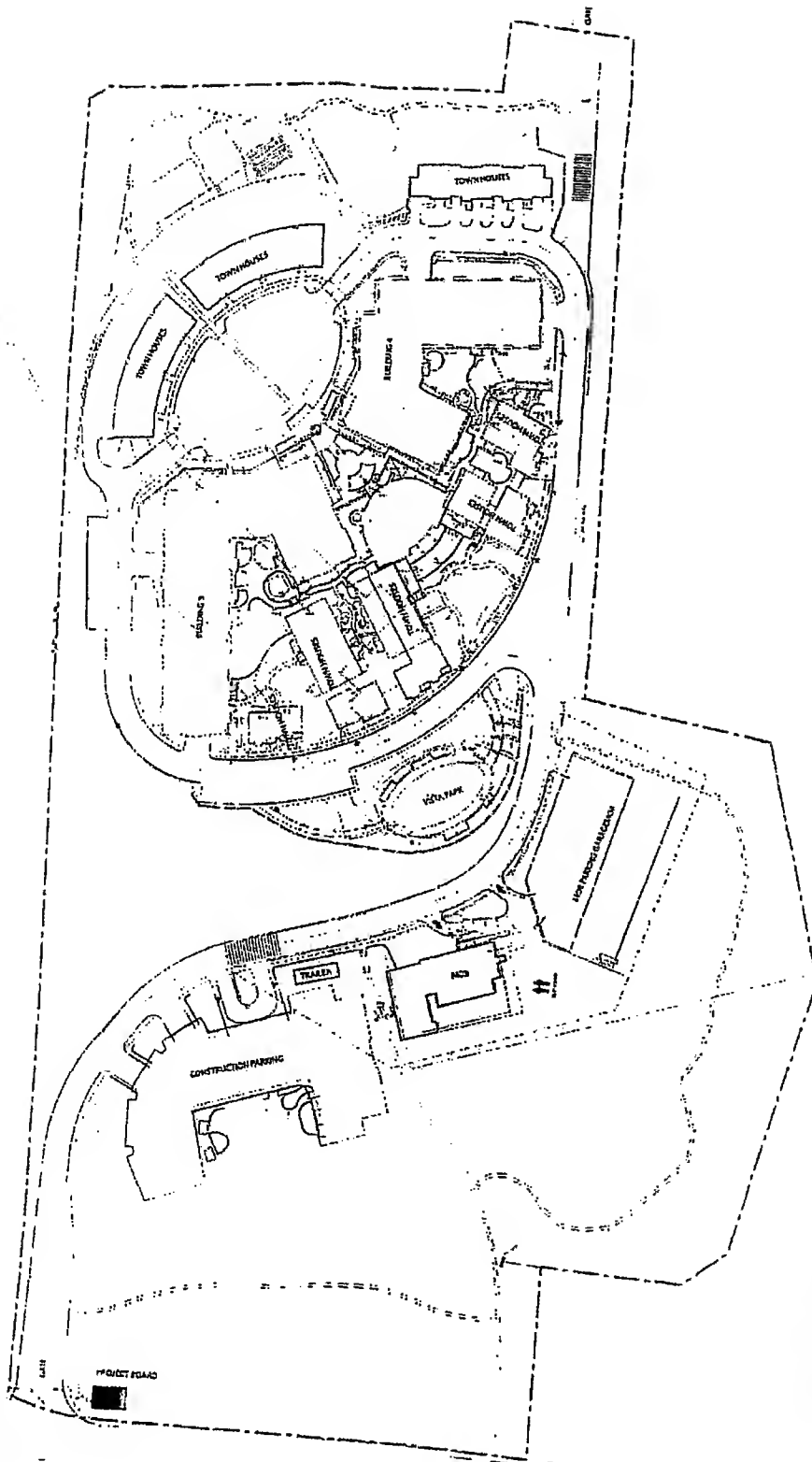












**SYMMES MOB LOGISTICS**

Construction  
Parking  
Rumble Strip /  
Wheel Wash  
Chain-Link Fence

**PHASE 2**

Phase	Schedule	Location		Activities
		Existing parking lot adjacent to Old Nurses' Building	Old Nurses' Building	
2	Approximately 6 - 8 months		Old Nurses's Building	Parking Garage - grading, ledge removal, construction, paving
			Old Nurses's Building	Renovation of the existing building & expansion of shell in the back Landscaping and landscaping

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**SUFFOLK**

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## OPERATIONS & MITIGATION PLAN

### 1. Hours of Operation

The Town of Arlington's Noise Abatement By-Law – Title V, Article 12 (Attachment A) permits construction work between the following hours:

Monday – Friday:	7 a.m. – 8 p.m.
Saturday:	8 a.m. – 8 p.m.
Sunday:	By additional permit only

The by-law states: *"No person shall operate heavy equipment or construction equipment between the hours of 8:00 P.M. and 7:00 A.M. Monday through Friday and between the hours of 8:00 P.M. and 8:00 A.M. on weekends except as permitted in emergency situations as determined by the Town Manager after consultation with the Director of Public Works, the Director of Police Services or other Town officials as appropriate. Heavy equipment shall mean commercial or industrial equipment such as motorized earth moving equipment, jack hammers, pile drivers, trucks for loading and unloading dumpsters, tractor-trailers, and parking lot maintenance equipment, excluding emergency snowplowing."*

The typical hours of operation for the Symmes site will be 7:00 a.m. to 6:00 p.m., Monday through Friday. Saturday construction work, when necessary, shall typically occur between the hours of 8:00 a.m. and 4:00 p.m.

SRA recognizes the residential character that surrounds the site and the need to schedule construction work during hours that respect both neighborhood safety and quality of life. As a result, SRA shall undertake the following mitigation measures above and beyond the requirements of the Town By-Law:

- Prohibit rock processing and building demolition on weekends;
- Prohibit blasting on weekends and before 8:00 a.m. or after 4:00 p.m., Monday through Friday;
- Commit to not undertaking the following activities on weekends, without prior notice to the neighborhood and dialogue with the designated Town representative:
  - Sitework, in general, requiring heavy equipment.
  - Foundation work, including hoe-ramming and concrete pumping,
  - Steel erection,
  - Roofing;
  - Siding;
  - Exterior masonry and staging.

Work on Sundays or Town Holidays may be done only with prior permission from the Director of Police Services, and with prior notice and dialogue with the neighborhood representatives.

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### **2. Conservation Lands/ Buffer Areas Protection**

The land intended to be preserved as open space is very important to the Town and the buffer areas are of special importance to the neighborhood. These open space and buffer areas will be protected both during and after construction, consistent with the Conservation Restriction, which is part of the Land Disposition Agreement (LDA) with the Town.

In general, a Temporary Conservation Restriction (TCR) will protect these areas and allow only for specific construction to take place within certain areas covered by the restriction, such as utility installation in the Summer Street Woods.

At present, the details of the TCR are still a work in progress, and will be completed before or during the Special Permit processes. It will generally include the areas commonly known as the Summer Street Woods and the buffer areas. Please note that SRA has sited buildings and paved surfaces to be located on areas that are already developed and/ or paved. Until the final TCR plan is available, SRA is committed to reviewing the details of all necessary construction within TCR areas (e.g. MOB- Phase 1) with designated town representatives.

Attached please find a conceptual Limits of Work Plan, which shows the line that divides the areas in which construction will occur from the areas that will be protected under the TCR (Attachment B).

### **3. Off-Site Activity**

No activity shall affect neighboring property. If SRA must work on any neighboring land, then written authorization must be obtained from the owner and distributed to relevant Town authorities.

Should SRA negatively or adversely impact private and/ or public land or amenities, then SRA is fully responsible for repairing/ restoring said lands or amenities to existing condition within a reasonable timeframe and at its own expense.

SRA will need to perform off-site construction work such as:

- Installation of adequate sewer and storm water systems;
- Construction of sidewalks and pedestrian pathways; and
- Additional traffic and/ or utility improvements.

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SRA shall be responsible for controlling traffic and policing any work conducted off-site. Off-site construction work that impacts traffic flow shall be scheduled during off-peak traffic hours.

#### **4. Site Cleanliness and Maintenance**

SRA shall keep a clean site during construction. SRA shall be responsible for the general upkeep and routine maintenance of the entire site.

All dumpsters shall be properly maintained and stored at least 100 feet away from the property line. SRA shall be responsible for regular trash disposal and shall ensure that each dumpster area is properly maintained. SRA shall arrange with the local disposal company to schedule service only inside allowed working hours.

SRA will take an active role with regard to the reprocessing and recycling of construction waste. SRA may dictate specific requirements to its contractor that will ensure that construction procedures allow for segregation, reprocessing, reuse and recycling of materials. All construction material, fill, debris and excavated material shall be stockpiled in areas designated in the Construction Plan. All material shall be stabilized to prevent erosion and control dust. Solid waste that cannot be recycled will be transported in covered trucks to an approved solid waste facility, in accordance with the Massachusetts Department of Environmental Protection's (DEP) Regulations for Solid Waste Facilities - 310 CMR 16.00 and the Massachusetts State Building Code - 780 CMR 3310.2.1 (see Attachment C). These requirements will be specified in the disposal contract.

Portable restroom facilities shall be located at least 100 feet away from the property line and cleaned on a regular basis.

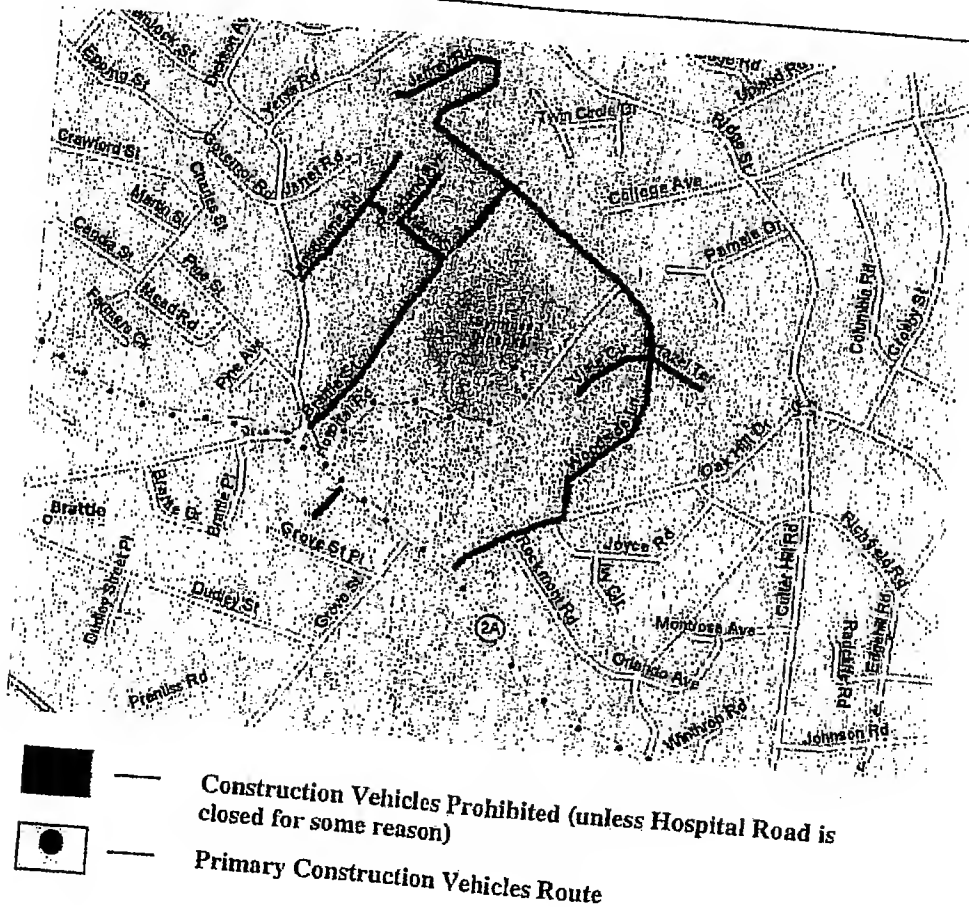
#### **5. Circulation - Traffic & Parking**

SRA is committed to minimizing the impact of all construction traffic (trucks, deliveries, personnel, etc.) on the surrounding neighborhood. SRA believes that, given the traffic generated by the current Hospital use and area traffic patterns, the project will not cause major traffic problems. If the entrance to Hospital Road is signalized prior to the start of construction, this signal should significantly improve traffic flow along the Summer Street corridor during construction.

To ensure SRA's commitment, prior to the start of construction, SRA shall distribute a construction schedule to the Inspectional Services Department and the Police Department. If construction work creates an excessive burden on current traffic patterns, SRA shall coordinate necessary police details with the Police Department.

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- a. *Construction Vehicles/ Equipment* – All construction vehicles (larger than a pick-up truck) shall enter and exit the site from Hospital Road. Construction vehicles shall not be permitted on Summer Street Place, Lansdowne Road, Rockland Avenue, Millett Street, Brattle Street, Jeffrey Road, Woodside Lane, Hazel Terrace and Vista Circle. The primary approach for construction vehicles shall be Summer Street (Route 2A). If Woodside Lane access is necessary, SRA shall notify the SNAC and ARB. The following map depicts the Construction Vehicles/ Equipment Traffic Plan:



- b. *Construction Personnel* – Construction personnel (anything smaller than a pick-up truck) shall enter and exit the site from Hospital Road and Woodside Lane. All parking during construction shall be provided on site. Per the Construction Plan, construction personnel parking has been sited on areas that are currently parking lots. Access to construction parking shall be paved or prepared to minimize tracking of dirt and dust. There will be no parking off site.

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- c. *Hospital Use* – Existing medical services may remain on-site during construction. If so, then the site will need to be accessible during the Hospital's hours of operation. Under this scenario, construction on the lower portion of the site and/ or the reconfiguration of Hospital Road may require temporary (not longer than several days) closures to Hospital Road and therefore, the rerouting of hospital traffic through the Woodside Lane entrance to ensure safe access to the Hospital. SRA shall issue a written notice to the Town and the SNAC prior to any closure of Hospital Road. Under this scenario, construction vehicles and equipment would still use Hospital Road.
- d. *MBTA Bus Route* – If existing medical services remain on site, SRA does not anticipate relocating the MBTA bus route. If relocation is necessary, SRA shall notify the Town, SNAC and public through public advertisement in the Arlington Advocate.

**6. Demolition**

Demolition shall be conducted in a manner that minimizes the impact to the surrounding neighborhood and protects the safety and health of Town residents.

SRA is sensitive to the close proximity of the existing Hospital to abutting properties. To protect the abutters and the steeply sloped areas of the site, the demolition subcontractor shall take down/ pull the building in a direction toward the site's interior, away from the perimeter. SRA's detailed phasing and Construction Plan shall be presented 60 days prior to the commencement of demolition activities.

SRA shall ensure that the subcontractor install a movable fence around the building to ensure public safety. As further protection to abutters, SRA shall use solid wood or plywood fencing, 8' in height with minimal seams, along the majority of the site perimeter that runs parallel to Brattle Street and Woodside Lane. In all other areas, the fencing will be chain-link, wrapped with green fabric, 8' in height. Both types of fencing will serve as solid protection from demolition activities. Additionally, the fencing will help to reduce noise. If, while reviewing the project with the demolition subcontractors, additional protection is required, it will be installed and SRA shall notify the SNAC.

To minimize dust and debris during demolition, contractors shall be required to use chutes into dumpsters to dispose of debris from upper floors. Wetting agents shall be used on building materials and debris to control dust. SRA shall commit to renting the Fire Department pumper truck to water down demolition materials, if needed. Dust mitigation and monitoring is further detailed under *Item #8 "Dust Control."*

The majority of the demolition will be performed with heavy equipment such as cranes, excavators, etc. To minimize disruption and noise on weekends and at the end of the business day, SRA will make best efforts not to conduct demolition of building



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structure on weekends or Monday through Friday, past 4 p.m. Further noise mitigation measures are outlined under *Item #9 "Noise Control."*

Massachusetts State Building Code – 780 CMR 3310.0 *Demolition and Excavation* (see Attachment C) requires an issuance of a written Notice of Intent "to the owner of each potentially affected adjoining lot, building or structure at least one week prior to the commencement of work." The definition of a "potentially affected adjoining lot" will be determined by the Inspectional Services Department. This definition shall be presented to the ARB, SNAC and public at least one month prior to start of construction. In addition, our construction schedule will be publicly posted at the entrance to Hospital Road and on the Construction website.

SRA shall complete the Town of Arlington Inspections Division Demolition Sign-Off Sheet (see Attachment D), which outlines removal of the following utility services from the Symmes Hospital:

- o Gas Company
- o Electric Company
- o Telephone Company
- o Public Works Cable TV Systems

SRA shall comply with all local, state and federal regulations that have set standards to protect public health and the environment, as highlighted in the Enforcement Plan (Section 4).

### Demolition/ Environmental Remediation Monitor

SRA is sensitive to the need for protecting public health and therefore has engaged the services of Diversified Environmental Corporation (see Attachment E) to be the on-site compliance agent by providing the following services, as outlined in their contract:

- *Identify the presence of asbestos-containing materials, underground storage tanks/above ground storage tanks (UST / AST), PCB's in light ballasts, florescent light tubes, stored chemicals, mold, pigeon guano and lead-based paint associated with the buildings.*
- *Develop detailed abatement specifications for the buildings scheduled for demolition/renovation and to perform on-site monitoring and testing during abatement activities.*
- *Outline our recommended scope of work (to remediate all hazardous materials) in order to provide liability protection, flexibility in planning and decision-making, and over all attainment of hazardous materials abatement objectives.*

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- *Conduct compliance monitoring to assure and document (Contractor) compliance with the specifications and applicable regulations ... (Diversified) will conduct inspections to determine when the Contractor has completed the job consistent with the requirements of the specifications and applicable regulations.*
- *A Final Project History and Monitoring Report; The report will contain an introduction to the project, a description of all activities performed on-site applicable certifications, Project Monitors' daily logs and checklists, air monitoring areas and results and all other documentation available for your permanent liability protection.*

SRA will work with Diversified to complete the Arlington Board of Health Demolition Inspection Checklist (see Attachment F); Checklist mandates identification and remediation efforts of any of the following:

- Asbestos
- Mercury Switches
- Abandoned Chemicals
- Coolant Gases
- Batteries
- Fuels and Storage Tanks
- Hydraulic Fluids
- Fluorescent Light Tubes
- Dielectric Fluids
- Radioactive Material
- Building Components Contaminated by Former Site Operations
- Additional Unspecified Concerns of Materials
- Dust Control and Animal Control

#### **7. Blasting & Preconstruction Surveys**

Blasting shall be conducted in a manner that minimizes the impact to the surrounding neighborhood and protects the safety and health of Town residents. SRA has and will continue to explore building layout options that minimize ledge blasting on site. As a result of SRA's efforts to date, ledge blasting has been reduced by nearly 2/3 from the original proposal submitted under the Town's RFP process.

To minimize disruption and noise on weekends and at the end of the business day, blasting will not occur on weekends or before 8 a.m. and past 4 p.m. Monday through Friday.

To minimize dust and vibration during blasting, SRA's contractor and its subcontractor shall use mitigation measures such as blasting mats.

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SRA's blasting subcontractor shall implement Preconstruction and Post Construction Blasting Video Surveys of all potentially affected lots. The current plan is to survey the exterior of most abutter buildings on Brattle Street, Woodside Lane and Vista Circle (a preliminary "Conceptual Preconstruction Survey & Monitoring Plan" is attached to the NPP: Attachment G) and selected interior surveys. This company shall coordinate with SRA's engineer team to identify those lots that could be potentially affected by blasting. This company will provide certified mail notice to all owners of potentially affected lots requesting access to units so that a video survey can be taken. The company will prepare a final report with all supporting documentation.

Please note that these preconstruction surveys, while conducted by the blasting subcontractor, shall serve as the record for the SRA project, and will be conducted prior to demolition of the Hospital. Copies of the preconstruction survey will be distributed to the property owner for their record, review and comment.

The proposed limits of preconstruction surveys do not preclude property owners who are not on the project's survey list from conducting their own surveys, or requesting surveys, or making claims for damages. Requests for additional SRA surveys will be evaluated on case-by-case basis.

SRA's blasting subcontractor shall be responsible for filing blasting logs with the Arlington Fire Department, and compliance with Massachusetts Board of Fire Prevention Regulations 527 CMR Section 13 - *Explosives*.

As outlined in the Communication Plan, SRA shall conduct a Construction Plan/ Kick-Off Meeting, prior to the start of construction, at which time, the blasting process and Protection Plan will be explained/ discussed in further detail.

The Enforcement Section of the NPP will outline how a person can submit a complaint regarding the blasting process. Specifically, the Executive Office of Public Safety/ Department of Fire Services and Town of Arlington have a Blasting Damage Complaint Form that (see Attachment H) "must be returned to the head of the (Arlington) fire department within 30 days of the alleged incident." SRA shall distribute a copy of that form as part of this NPP.

Prior to blasting, SRA's contractor or subcontractor shall file for a Blasting Permit from the Arlington Fire Department (AFD). Before issuing a permit, the AFD will conduct a background check to ensure that the subcontractor is registered and in good standing with the State Fire Marshall's Office.

### Vibrations & Monitoring

SRA has hired McPhail Associates, Inc. (McPhail), an independent geotechnical/ geo-environmental engineering firm, licensed by the Commonwealth of Massachusetts, to conduct vibration-monitoring services.

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According to McPhail:

- *Vibration monitoring will occur during each round of blasting. "Background" vibration levels will be obtained prior to construction for comparative purposes.*
- *Reporting of the blasting operation will include details of the blast round and results of the vibration monitoring, including seismograph locations, peak particle velocities and frequencies.*

Monitoring will provide a means to evaluate the blasting contractor's performance against the vibration criteria presented in the contract documents. These levels have been established, by the Commonwealth, to maintain the risk of damage to adjacent residential structures to within generally acceptable levels. Please find attached a report from McPhail Associates regarding the anticipated quantitative/ qualitative vibration levels associated with construction methods, such as blasting and hoe-ramming (Attachment I). Please note that McPhail concludes that vibration levels from the site should be able to be controlled to within the "barely perceptible level." Based on the measured vibration levels recorded during construction, the Contractor may be required to adjust his blasting procedures.

AFD personnel will be on-site to monitor all blasting activities, including data from seismographs and blasting logs. Seismographs will be placed between the location of the blast and neighboring properties to ensure *"the affects of ground vibration and airblast, as indicated by the seismograph readings, do not exceed the limits specified with 527 CMR Section 13.09."*

Please refer to the Conceptual Preconstruction Survey & Monitoring Plan for conceptual vibration monitoring locations – in general, they will be located at or near the property lines between construction activities and the neighborhood. These locations will be adjusted contingent on the specific source of potential vibration. If the vibration levels at the site, or observed vibrations off-site, indicate a need for additional off-site monitoring, this will be done.

Please note that these conceptual monitoring points are also proposed for noise and dust – and are also subject to adjustments in locations and common sense.

All documentation and reporting for blasting operations shall be made immediately and freely available to neighborhood representatives.

## 8. Dust Control

SRA is committed to controlling and minimizing dust as much as possible. To ensure this commitment, SRA has hired McPhail Associates, Inc., as a third-party independent consultant, to provide on-site monitoring services of construction

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activities that may produce dust. McPhail will ensure that SRA controls dust by utilizing the measures outlined below.

SRA anticipates that most construction activities that generate dust will occur in Phase 1 of the residential project.

SRA shall apply water or other wetting agents on a regular basis, consistent with the wind speed, temperature and relative humidity, to minimize the presence of airborne particles. In instances where the introduction of water is not the ideal solution because of the anticipated work schedule, calcium chloride or synthetic polymers can be used.

SRA shall make provisions to minimize the transport of sediment by water runoff or vehicle tracking onto paved surface. SRA shall remove sediment from the roads by shoveling or sweeping and properly disposing of said materials. SRA shall commit to bi-weekly, or as necessary, street sweeping during site work activities, such as excavation, blasting, etc. (primarily in Residential - Phase 1), on all affected roads.

All construction vehicles transporting materials/ debris to and from the site must use adequate coverings to keep said materials in the vehicle. SRA is responsible for cleaning from the roadway any material that may not stay inside the vehicle. SRA shall install roll-off areas/ wheel wash locations on-site to prevent tracking of dirt and dust, especially during site work activities. These locations shall be shown on the Construction Plan. SRA will experiment with the use of rumble strips, but we are concerned about the adverse noise impact these may create. Construction vehicles leaving the site must be clean.

#### Dust Monitor

According to McPhail:

*Excavation and blasting work will be performed under the appropriate level of monitoring by a McPhail field scientist. To prevent exposure to excessive particulates in air during excavation, McPhail will perform monitoring for dust in air at the fence line surrounding the construction area where the nature of the exposed soils dictate vigilance. Dust monitoring will be performed utilizing a Mini-Ram PDM-3 dust monitor, or equivalent meter, during periods of intensive excavation and soil removal.*

*If the site activities generate excessive dust, then mitigation measures will be implemented accordingly. These measures may include spraying dry soils with water or a surfactant agent prior to excavation, covering trucks with tarpaulins, covering stockpiles with polyethylene, limiting the excavation area or ceasing excavation operations during high wind conditions.*

*Airborne dust will be monitored at both up-wind and down-wind locations during excavation activities to establish baseline levels, ensure regulatory compliance,*

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quantify conditions triggered by visual observations, and to inform potential mitigation measures. Dust monitoring will be implemented as follows:

- An appropriate dust monitoring action level will be calculated, and conditions at the fence line will be monitored during construction.
- During periods of intensive excavation and soil removal dust monitoring will be performed and readings recorded. If the average of the readings over a period of thirty (30) minutes is in excess of the action level indicated above or lowest PM10 is documented as being sustained, dust-mitigating measures will be implemented accordingly. If the average of the readings over the same period are consistently below action levels, inspection personnel may modify the frequency of this monitoring accordingly.

Mitigative measures may include spraying dry soils with water or a surfactant agent prior to excavation, covering trucks with tarpaulins, covering stockpiles with polyethylene, limiting the excavation area or ceasing excavation operations during high wind conditions.

Potential receptors that may be exposed to site contaminants during construction are considered to be the general public on an occasional basis and site workers. Access to the site will be restricted to the personnel involved in construction activities. Site activities will be conducted in accordance with OSHA and any other applicable federal and state regulations, and a site specific Health and Safety Plan will be developed for use by site workers and to protect the general public.

If excessive dust from the construction site migrates to the neighborhood and warrants clean up over and above reasonable, annual cleanup that would have been performed in the absence of the construction activity, SRA shall clean it up. The designated town representative shall determine the final scope of cleanup.

#### 9. Noise Control

SRA shall utilize best efforts to mitigate noise generated on site and at a minimum comply with the Town By-Law Article 12 – Noise Abatement. To this end, SRA has retained the services of Acentech, Inc. to be the professional acoustic consultant for the project. SRA has requested that Acentech study the Construction Plans and offer a report and recommendations regarding noise levels and mitigation measures; the final report is attached (Attachment J).

In conjunction with Acentech, SRA prepared the following chart that indicates "Planned Construction Activities and Associated Equipment:"

Phase <sup>1</sup>	Location	Activities	Equipment <sup>2 &amp; 3</sup>
Residential 1	Upper site	Environmental remediation, demolition of hospital building	Backhoe, crane, jackhammer, trucks

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	Entire site	Sitework, excavation, blasting, rock processing, grading, stockpiling	Backhoe, vibratory hammers, hoe-ram, rock processor, blasting charges, trucks
	Beginning across from Grove St. on Summer St. and running to the upper site	Gas, sanitary, and storm utilities	Backhoe, compressors, vibratory hammers, trucks
	Upper site	Foundations for Buildings 3 & 4	Concrete pump, cherry picker, vibratory hammers, jackhammers, trucks
Residential 2	Upper site	Buildings 3 & 4 construction - steel erection, building shell and interior work	Cranes, stud welders, steel guns, gas welders, trucks, jackhammers, generator
	Lower site	Foundations for Building 2	Concrete pump, cherry picker, vibratory hammers, jackhammers, trucks
	Upper site (across from Vista Park)	Associated townhouses with Buildings 3 & 4 - construction	Crane, trucks
	Upper site	Buildings 3 & 4 - building shell, interior work, punch list	Crane, trucks
Residential 3	Lower site	Building 2 construction - steel erection, building shell, interior work	Cranes, stud welders, steel guns, gas welders, trucks, jackhammers, generator
	Upper site (across from Vista Park)	Associated townhouses with Buildings 3 & 4 - interior work, punch list	None
	Upper site (across from Woodside Lane)	Townhouses on upper site - construction	Crane, concrete pumps, trucks
	Lower site	Building 2 punch list	None
Residential 4	Upper site	All townhouses - interior work & punch list	None
	Entire site	Vista Park construction & landscaping	Trucks, asphalt spreader
	Existing parking lot adjacent to Old Nurse's Building	Parking garage - grading, ledge removal, construction, paving	Backhoe, vibratory hammers, hoe-ram, trucks
Medical Office Building	Old Nurse's Building	Renovation of the existing building & expansion of shell in the back	Cranes, trucks
	Old Nurse's Building	Landscaping	Trucks, asphalt spreader

1 - Each phase will last approximately 6 to 8 months.

2 - The equipment listed herein has the greatest potential to generate intrusive noise levels.

3 - The construction activities may change and the equipment listed herein may be used in different phases and/ or not used at all.

Accentech's analysis specifically highlights the effectiveness of barriers between the source of noise and the surrounding community. Yet, the analysis notes the success of

## Symmes Arlington Conservation & Improvement Project

### Neighborhood Protection Plan

this measures requires the blockage of line-of-sight. Therefore, SRA has committed to erecting:

- A solid wood or plywood fence with minimal seams, 8' high, along most of the site parallel to Brattle Street, Woodside Lane, and Vista Circle

*Please note that this wood fence is predicted to reduce sound levels at the neighborhood by as much as 15 db.*

- A 8' foot high chain link fence wrapped in green blanketing around the remainder of the construction site; and
- Placing the trailers on the edge of site, parallel to Vista Circle to act as an additionally noise/ sight barrier.

In addition to the above, SRA shall implement a noise mitigation program that includes, but is not be limited to, the following measures:

- Allowing construction personnel parking on the upper site only in an area blocked by wood fencing;
- The general contractor's safety officer(s), to ensure that proper mufflers are installed and fully operational, will inspect all construction equipment. Any equipment not passing this inspection will not be used. According to Acentech, this can reduce noise levels by up to 15 decibels.
- SRA shall make best efforts to ensure that construction trailers will be oriented in a direction so that all doors open to the interior of the site and AC units do not directly face the neighborhood.
- Wherever possible and economically feasible, replacing specific construction operations and techniques with less noisy and intrusive operations;
- Prohibition against rock processing and building demolition on weekends;
- Prohibition against blasting on weekends and before 8:00 a.m. or after 4:00 p.m., Monday through Friday;
- Commit to not undertaking the following activities on weekends, without prior notice to the neighborhood and dialogue with the designated Town representative:
  - Sitework, in general, requiring heavy equipment.
  - Foundation work, including hoe-ramming and concrete pumping,
  - Steel erection,
  - Roofing;
  - Siding; and
  - Exterior masonry and staging.
- Scheduling equipment operations to keep average levels low, to synchronize noisiest operations with times of highest ambient noise levels, and to maintain relatively uniform noise levels;
- Coordination with contractor to ensure no truck queuing or equipment warm-up will be allowed prior to 7:00 a.m.;



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- Accordance with MGL Chapter 90: Section 16A Stopped motor vehicles; operation of engine; time limit; penalty - *"No person shall cause, suffer, allow or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes."*
- Locating noisy equipment as close to the center of the site as possible;
- Turning off idling equipment; and
- Ambient sensitive backup alarms, which automatically adjust the alarms noise level to 5 to 10 dBA above ambient background noise.

#### Noise Monitor

Throughout the duration of the project, SRA, SRA's contractor, and the Town's designated representative shall review construction operations, noise mitigation techniques and, if needed, explore additional measures.

SRA shall retain Acentech, Inc. to provide noise monitoring and consultation monthly during Phase 1 and as needed throughout the duration of the project.

#### **10. Lighting**

Lighting on site should be so directed as not to shine or glare onto adjacent properties.

#### **11. Rodent/ Pest Control**

Prior to any construction activity, SRA shall implement a pest control program on site. The program shall include pre-treatment of work areas and records of the implementation of the program should be kept throughout the duration of construction. Said records should be filed with the Town of Arlington Animal Control Officer, the Board of Health and any interested party. The project shall comply with Town of Arlington regulations governing rodent and trash control.

As noted in this Section of the NPP, under Site Cleanliness and Maintenance, SRA's contractor shall be responsible for properly maintaining all dumpsters and trash containers. This includes properly securing all dumpsters from rodent tampering. All food waste shall be placed in 55-gallon drums free of holes or in other properly secured trash containers.

The clerk of the works/Suffolk's project manager shall inspect as long as needed, all basements and sub-basements on site, prior to certifying rodent free.

Rodenticide shall only be placed in tamper resistant bait stations (bait station record, company name, telephone number, and bait station number shown on exterior), secured to a fixed object (e.g. inside a perimeter fence or inside burrows determined

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be active), firmly plugged after poison baiting, and inspected the following day for any bait kicked out.

Regular inspections shall occur bi-weekly, or as needed, and include not only opening all bait stations, recording consumption, and replacing bait as needed but also inspecting weeds, dense groundcovers, dense shrubs, along walls, break/lunch areas and material storage areas.

The Town's Animal Control Officer and Board of Health Director should inspect the site on a regular basis.

#### 12. Site Safety

SRA's contractor (Suffolk Construction) shall prepare a site-specific Safety Plan prior to the start of construction. This plan will be part of the Construction Plan and will be distributed at least one month prior to the start of construction.

All Suffolk employees Occupational Safety & Health Administration (OSHA) certified and shall be responsible for project safety. The team shall conduct weekly reviews, establish monthly safety reports, and undertake regular orientations with all new personnel to ensure enforcement of the Suffolk policy and the Neighborhood Protection Plan.

SRA shall erect a fence around the construction site, which will be locked at the end of each workday.

Worth noting, last year Suffolk's OSHA recordable incident rate was 0.6, while the industry average was 7.8. In 2004, the Associated General Contractors of America (AGC) announced Suffolk the winner of the its national Construction Safety Excellence Award in the Building Division category. In addition, the Associated Builders and Contractors (ABC) and OSHA jointly awarded Suffolk the Platinum Status Safety Achievement award for the third year in a row.

#### 13. Site Hazards/ Contamination

Several known oil releases have occurred on-site in the past. It is important to note that oil is not toxic and is covered under that Massachusetts Contingency Plan (MCP) as administered by the Massachusetts Department of Environmental Protection. The HealthSouth/ Lahey Partnership (Partnership) is responsible for these hazards. SRA has been in continued consultation with the Partnership and the Town's Licensed Site Professional to ensure that these past releases are not exacerbated by SRA's construction operations. SRA has completed a Phase II Environmental Site Assessment Report, required by the MCP, which will outline which mitigation

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measures SRA must undertake. This report is a public document and shall be filed with the Town for public viewing.

Above any local, state, or federal requirements, SRA has engaged and executed a contract with ENSR International, a provider of environmental and energy development services, to conduct a bedrock fracture analysis of the Symmes site to provide further identification and confirmation of pathways of these oil releases. This report is complete and part of the Phase II environmental Site Assessment. Per the Land Disposition Agreement (LDA), these reports will be used to write a "Materials Management Plan," that identifies all hazards on site and which parties are responsible for remediation efforts to be undertaken prior to construction. The Town and SRA will agree on the Materials Management Plan and it will become an addendum to the LDA.

If hazardous wastes are found on site during construction, SRA shall immediately notify the Massachusetts Department of Environmental Protection, the Arlington Board of Health, the Inspectional Service Department, the ARB, and the SNAC. All hazardous wastes removed from the site shall be disposed of in accordance with local, state and federal laws and regulations. Certificates of proof of disposal shall be furnished for public review to the Board of Health.

#### **14. Existing Utilities**

SRA shall map out the location of all existing utilities prior to the start of construction. SRA shall notify neighbors at least 2 days in advance of any potential disruption to the utilities in the area. Notification shall be mailed or fliers shall be distributed by hand.

#### **15. Project Information Board**

A Project Information Board will be erected in a prominent location, most likely at the Hospital Road and Summer Street intersection, and will display construction information and scheduling.

SRA shall prominently post public signage to identify the construction site and off limits areas to the public.

A secondary Project Information Board with contact information and emergency construction notices shall be posted at Hospital Road and Woodside Lane.

#### **16. Drainage, Storm Water Management and Erosion Control**

SRA shall not significantly impact both on-site and off-site drainage and flow patterns and shall maintain and/ or improve said patterns during and after construction.

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SRA shall develop, as a requirement to the Special Permit Process, a Storm Water Management Plan, for adequate drainage, storm water, erosion and sedimentation control.

SRA shall install, when necessary, silt fencing and/ or hay bales around the perimeter of the construction site to protect and stabilize slopes and control water run-off. Silt fencing and hay bales are usually the most effective method to control storm water.

SRA's engineering team does not believe that groundwater monitoring will be necessary because the existing water table is significantly below all areas of the site on which construction activities will occur.

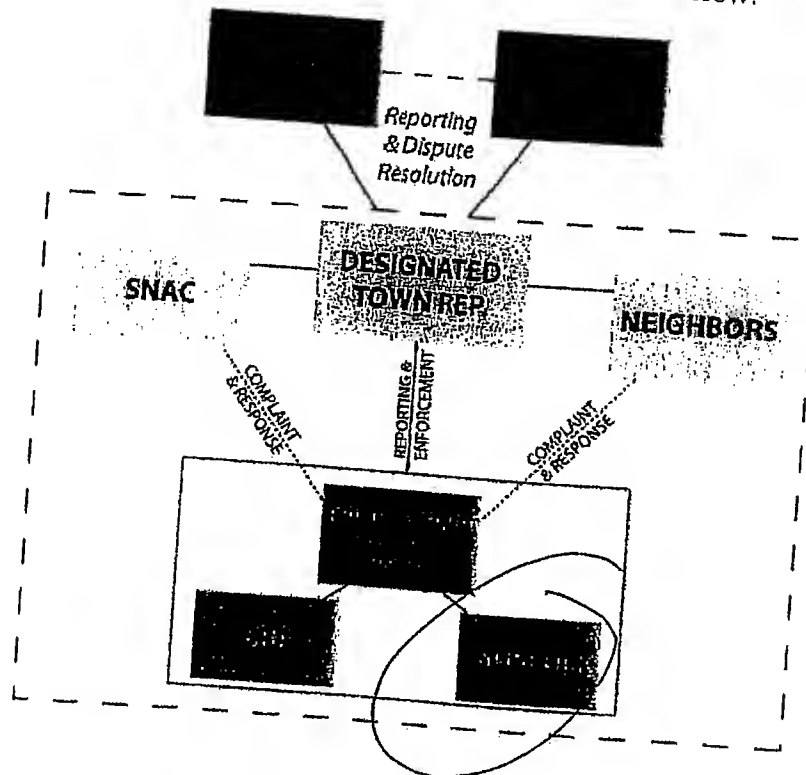
Piles of debris will be covered, when necessary, to control erosion and sedimentation.

All disturbed areas, which are not part of the project, shall be revegetated immediately following completion of the work.

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### COMMUNICATION PLAN

The implementation of the Symmes Neighborhood Protection Plan requires both clear demarcation of roles and responsibilities among the stakeholders and open and fluid communication. Please refer to the proposed Organization Chart below:



Specifically, SRA proposes to undertake the following measures to ensure open and fluid communication:

- **SRA Contacts List** – Prior to the start of construction, SRA shall distribute a contacts list to neighborhood residents, the SNAC, the Arlington Redevelopment Board (ARB), Town Fire Department and Town Police Department. This list will include names, phone numbers, e-mail addresses and mailing addresses for SRA's representatives (Edward A. Fish Associates) and the contractor's (Suffolk Construction) representatives. The Contacts List shall be posted to the Project Information Board (at the entrance to the site) and to the Project Website.
- **Primary Point of Contact** – A designated representative of the construction team, reporting to SRA's Director of Construction, shall be the primary point of contact for neighbors, SNAC members, the Town, etc. This individual shall be the central point of communication for the Symmes project, and the monitoring of this NPP will be their principal focus. This person shall coordinate communication, handle emergency

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and non-emergency situations, lead SRA and SNAC meeting, etc. The following will assist the primary point of contact:

- Suffolk Construction's Project Manager (on-site), Nick Rucky; and
- SRA's off-site representative, Patrick McMahon.

The Primary Point of Contact shall be posted to the Project Information Board at the entrance to the site and to the Project Website. The Primary Point of Contact will, on most occasions, be on-site during any necessary Saturday work. If not, then that person's contact information should be: posted on the Project Information Sign; known by any subcontractor on-site, and known by the designated town representative and the Inspectional Service Department.

- **Designated Town Representative** (to be determined) – The representative shall be assigned the following tasks:
  - General oversight of the NPP on behalf of the Town and neighborhood;
  - Monitoring of on-going construction activities and mitigation measures;
  - Involvement in the preparation of detailed phasing plans;
  - Attendance at all formal meetings with the neighborhood or other Town entities;
  - Preparation of monthly reports for all Town stakeholders;
  - Receive and review SRA regulatory filings for the project; and
  - General negotiation and dispute resolution between the parties.
- **Emergency Contact** – SRA shall provide 24-hour access to personnel for emergency situations. Contact information shall be included as part of the "Contacts List."
- **Construction Plan/ Kick-Off Meetings** – At least one month prior to the start of construction, SRA shall conduct a meeting to introduce the entire on-site project team, review the construction schedule and Neighborhood Protection Plan, distribute contact lists, explain in detail the Phase 1 activities, etc.

At least one month prior to the start of each subsequent phase, SRA shall conduct a meeting to discuss project progress and the upcoming activities.
- **Project Website** – SRA shall develop a Project Website to provide the following project information, to be updated semi-monthly:
  - SRA contacts list;
  - Construction Plan/ project narrative;
  - Two-week look-ahead project schedule with narratives;
  - Community/ project meeting notices;
  - Meeting minutes; and
  - Additional information required by the Arlington Redevelopment Board.
- **Project Information Board** – SRA shall erect a project information board at the entrance to the site at the Hospital Road and Summer Street intersection to display:

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- SRA contacts list;
    - Two-week look-ahead project schedule;
    - Construction advisories; and
    - Community/ project meeting notices.
  - **Construction Advisories/ Notices** – In addition to notifying the proper Town representatives, SRA shall post construction advisories via the Project Information Board and the community e-mail list for events such as and similar to:
    - Changes/ updates to the bi-monthly schedule;
    - Interruptions to utility services;
    - Unforeseen conditions; and
    - Weekend work.
  - **SRA & SNAC Meetings** – Through Residential Phases 1 and 2, SRA's Team shall meet with SNAC, once every two months or as-needed to review project progress, discuss relevant issues or problems and make certain the project is adhering to the parameters set forth in this Neighborhood Protection Plan. For all other phases, 2 meetings per phase should suffice, but again, as needed. Meeting minutes shall be submitted to the Town for public record and posted to the website.
  - **Community Communication with SRA** – Town residents may use phone, e-mail or mail to inform the project team of any issues or concerns throughout the duration of the project.
  - **SRA Communication with the Community** – SRA or its contractor will use the Project Sign, Website and e-mail to communicate with the community outside of regular meetings with the SNAC.
- The SNAC shall supply SRA with a contact list including, at a minimum, the email addresses of all neighbors who wish to be notified of project updates and schedule changes.
- **Question/ Complaint Process** –  
All questions and complaints relevant to the project should be communicated, via e-mail and/ or phone, in the following sequence:
    1. SRA's Primary Point of Contact;
    2. SRA's Director of Construction;
    3. SRA's Off-Site Representative;
    4. Town's designated representative; and
    5. If needed, the Building Inspector.

If and when life safety is an immediate concern, neighbors are encouraged to contact the Police and Fire Departments concurrent to contacting SRA.

SRA shall respond immediately to emergency situations, ceasing work if necessary to resolve the issue. In non-emergency situations, SRA shall confirm receipt, via e-mail

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and/ or phone, within a 24-hour period. SRA shall make best efforts to follow-up with an action plan to address or resolve the issue as soon as possible and in most cases within no more than 5 days.

The Primary Point of Contact shall log the issue and subsequent actions taken. These logs shall be forwarded to the Town's representative on a daily or maximum weekly basis and at their discretion will be included in the monthly report. The logs of complaints shall include the resolution as soon as it is implemented.

Neighbors should feel free to appeal to the designated Town representative should they feel it necessary at any time.



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**ENFORCEMENT PLAN**

**I. SRA Enforcement**

A number of the guidelines in the Neighborhood Protection Plan (NPP) are enforceable through local, state and federal regulatory entities. Yet, comprehensive enforcement of the NPP requires SRA leadership.

- The NPP, in full form, shall be included in the:
  - Land Disposition Agreement between SRA and the Town;
  - Special Permits; and
  - Building Permits.
- The NPP, in full form, shall be included in SRA's contract with Suffolk Construction and Suffolk's contract with their subcontractors. Therefore, the NPP will become a legally binding document for all contractors on-site.
- SRA's Director of Construction and Suffolk's Team shall administer the following penalties for violations to this Neighborhood Protection Plan, on a subcontractor to subcontractor basis:
  - 1<sup>st</sup> Violation: A verbal and written warning.
  - Each violation thereafter: A \$500 fine payable to a Town of Arlington entity of the Town's choosing.
- SRA's Director of Construction and Suffolk's Team shall directly oversee compliance with all guidelines. Together, they shall:
  - Schedule and conduct operations in a manner that will minimize, to the extent feasible, the disturbance to the public in areas adjacent to the work and to occupants of buildings in the vicinity.
- Suffolk's on-site team shall provide an additional layer of oversight and enforcement, overseeing the implementation of the Safety & Health Program. The Suffolk teams' responsibilities shall include regular orientations with all new personnel to ensure knowledge of the Suffolk policy and the Neighborhood Protection Plan.
- SRA has engaged Diversified Environmental Corporation to conduct compliance monitoring services to ensure that the entire building demolition process, before, during, and after, complies with all applicable state and federal regulations. Acknowledging the neighborhood's sensitivity to public health risks posed by building demolition, SRA and Diversified's contract includes more monitoring and reporting than is required by EPA and DEP standards.

Diversified is required to report all environmental conditions by state and federal law. The company is licensed through a number of state and federal regulatory agencies. For example, Diversified's in-house Analytical Laboratory for asbestos analysis is accredited through the American Industrial Hygiene Association (AIHA) Proficiency

## Symmes Arlington Conservation & Improvement Project Neighborhood Protection Plan

Analytical Testing (PAT) program and the Asbestos Analyst Registry (AAR). If Diversified fails to properly conduct and then report asbestos analysis, then they lose these accreditations and therefore lose their ability to conduct any business operations.

- SRA has engaged ENSR International to conduct a bedrock fracture analysis to profile historic oil release on-site. The analysis will provide further certainty of how to address the oil release conditions on site so that they do not become a problem. This analysis is also not required by EPA or DEP.

### II. Neighborhood Protection Plan Enforcement & Dispute Resolution

(see Organization Chart in the Communication Plan)

To the extent possible, it is the intent of SRA to establish communications, dialogue and mutual trust with SNAC and other representatives from the neighborhood. Functionally, the enforcement of the NPP rests with the designated Town representative.

As stated above, the NPP will be bound to the project building permit and the project Special Permit. If dispute resolution is needed outside the purview of the Town representative, it will be sought at the Town of Arlington Building Department level and/or the Arlington Redevelopment Board, who have the power to require immediate, specific action and/or issue stop work orders.

### III. Town, State & Federal Enforcement

SRA shall comply with all applicable regulatory laws, codes and ordinances. There are a significant number of town, state and federal regulations that provide for public safety and preservation of quality of life.

Following are the major entities that will monitor the project and enforce applicable guidelines:

**Arlington Redevelopment Board** – The NPP is part of the Arlington Redevelopment Board's Land Disposition Agreement with SRA, which is a legally binding document. Because SNAC was formed as a neighborhood advisory group to the ARB, then the SNAC shall advise both SRA and the ARB of violations of the NPP. In turn, neighbors should advise/ submit input to the SNAC.

Contact Information:

Phone: (781) 316-3090

Web: [www.town.arlington.ma.us/Public\\_Documents/ArlingtonMA\\_Planning/index](http://www.town.arlington.ma.us/Public_Documents/ArlingtonMA_Planning/index)

Relevant Documents:

- Land Disposition Agreement

## Symmes Arlington Conservation & Improvement Project

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[www.town.arlington.ma.us/Public\\_Documents/ArlingtonMA\\_Planning/Symmes%20LDA](http://www.town.arlington.ma.us/Public_Documents/ArlingtonMA_Planning/Symmes%20LDA)

**Town of Arlington Inspectional Services Department** – Responsible for enforcing the Commonwealth of Massachusetts' Building, Wiring, Plumbing, and Fuel Gas Codes as well as the Town of Arlington's Zoning By-Laws. Inspectional Services will monitor all construction activities throughout the project's duration to ensure compliance with these regulations.

**Contact Information:**

Phone: (781) 316-3390

Web: <http://arlserver.town.arlington.ma.us/InspectionalServices/>

**Relevant Documents:**

- Massachusetts State Building Code  
<http://www.mass.gov/bbrs/code.htm>
- Town By-Law (Title VI):  
[http://www.town.arlington.ma.us/Public\\_Documents/ArlingtonMA\\_TownBylaws/title6](http://www.town.arlington.ma.us/Public_Documents/ArlingtonMA_TownBylaws/title6)

**Town of Arlington Fire Department** – Responsible for ensuring code compliance with Chapter 148 of the General Laws of Massachusetts Fire Prevention and 527 CMR – Massachusetts Board of Fire Prevention Regulations.

Per the above regulations, the Department will be on-site to monitor all blasting activities. In addition, they administer the "Blasting Damage Complaint Form," issued by the Commonwealth of Massachusetts – Executive Office of Public Safety/ Department of Fire Services (see Attachment VI). This form allows any property owner, who alleges their property was damaged as a result of blasting, to report the incident for investigation by the Massachusetts Department of Fire Services. SRA shall keep extra copies of this form on-site for public use. *Please note: the – Executive Office of Public Safety/ Department of Fire Services mandates that the Blasting Damage Complaint Form "must be returned to the head of the (Arlington) fire department within 30 days of the alleged incident."*

**Contact Information:**

Phone: (781) 316-3800

Web: <http://www.firedept.arlington.ma.us/>

**Relevant Documents:**

- Chapter 148 of the General Laws of Massachusetts Fire Prevention  
<http://www.mass.gov/legis/laws/mgl/gl-148-toc.htm>
- 527 CMR - Board of Fire Prevention Regulations  
<http://www.mass.gov/dfs/osfm/fireprevention/cmr/index.htm>

## Symmes Arlington Conservation & Improvement Project

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**Arlington Board of Health** – Responsible for administering regulations as set forth by the Massachusetts Department of Public Health. In addition, the Board of Health administers the Demolition Inspection Checklist.

**Contact Information:**

Phone: (781) 316-3170

Web: [http://www.town.arlington.ma.us/Public\\_Documents/ArlingtonMA\\_Health/index](http://www.town.arlington.ma.us/Public_Documents/ArlingtonMA_Health/index)

**Arlington Department of Public Works** – Responsible for approving and monitoring all water and sewer work, storm water management, and erosion control.

**Contact Information:**

Phone: (781) 316-3108

Web: [http://www.town.arlington.ma.us/Public\\_Documents/ArlingtonMA\\_DPW/index](http://www.town.arlington.ma.us/Public_Documents/ArlingtonMA_DPW/index)

**Massachusetts Department of Environmental Protection (DEP)** – “Administers state laws and regulations aimed at preventing pollution, protecting natural resources, promoting safe disposal and recycling of wastes, and ensuring timely cleanup of contamination. The U.S. Environmental Protection Agency (EPA) administers similar federal laws and regulations, but delegates much of its enforcement authority to DEP.”

SRA's contractor shall register the project with DEP, who will then be responsible for monitoring the project. SRA shall comply with all EPA and DEP regulations.

In addition, neighbors can report an environmental risk/ hazard to the DEP Environmental Strike Force by calling 1.888.VIOLATE (1.888.846.5283) or by e-mail at: [Dana.Muldoon@state.ma.us](mailto:Dana.Muldoon@state.ma.us).

**Contact Information:**

Phone: 617-292-5500

Web: <http://www.mass.gov/dep/dephome.htm>

**Relevant Documents:**

- Massachusetts Contingency Plan  
<http://www.mass.gov/dep/bwsc/files/mcp/mcptoc.htm>
- Oil Spill Act  
<http://www.mass.gov/dep/bwsc/spillact.htm>

## ARTICLE 12: NOISE ABATEMENT

ART., S.T.M., 7 12/7/98

### Section 1. Declaration of Policy.

No person shall operate any heavy equipment or construction equipment between the hours of 8:00 P.M. and 7:00 A.M. Monday through Friday and between the hours of

8:00 P.M. and 8:00 A.M. on weekends except as permitted in emergency situations as determined by the Town Manager after consultation with the Director of Public Works, the Director of Police Services or other Town officials as appropriate. Notwithstanding the foregoing, it shall not be a violation of this bylaw for such equipment to be driven within the confines of the Town.

### Section 2. Definition.

Heavy equipment shall mean commercial or industrial equipment such as motorized earth moving equipment, jack hammers, pile drivers, trucks for loading and unloading dumpsters, tractor-trailers, and parking lot maintenance equipment, excluding emergency snow plowing.

### Section 3. Violations.

Any person violating any provision of this Article shall be subject to a fine not exceeding \$200.00 for each offense and/or an action in the superior court, seeking an order to cease and desist such activity. Each day or part thereof if any violation continues shall constitute a separate offense.

### Section 4. Manner of Enforcement.

Violations of this Article shall be prosecuted in the same manner as other violations of the Town By-Laws provided, however, that in the event of an initial violation of the provision of this Article, a written notice shall be given the violator requiring the cessation of the activity. No complaint or further action shall be taken in the event the cause of the violation has been removed, the condition abated or fully corrected upon the receipt of such notice.

In the event the violator cannot be located in order to serve the notice, the notice as required herein shall be deemed to be given upon mailing such notice by registered or certified mail to the violator at his last known address or at the place where the violation occurred. Subsequent violations of the same offense shall result in the immediate filing of a complaint and/or action in the Superior Court to cease and desist.

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Last Updated: Tuesday, Apr 06, 2004



## CHAPTER 33

### SITE WORK, DEMOLITION AND CONSTRUCTION

#### 780 CMR 3301.0 GENERAL

**3301.1 Scope:** The provisions of 780 CMR 33 shall apply to all construction in connection with work requiring a permit for structures in accordance with 780 CMR.

**3301.2 Other laws:** Nothing herein contained shall be construed to nullify any rules, regulations or statutes of state or federal agencies governing the protection of the public or workers from health or other hazards.

*When not covered by the provisions of 780 CMR, 454 CMR 10.00: Construction Industry Rules and Regulations, shall apply.*

**3301.3 Combustible and explosive hazards:** The provisions of 780 CMR which apply to the storage, use or transportation of *explosives*, highly *flammable* or combustible substances, gases and chemicals shall be construed as supplemental to the requirements of the federal laws, the regulations of the Department of Transportation (DOT) and 527 CMR 13.00, *Keeping, Storage, Use, Manufacture, Sale, Handling, and Transportation of Explosives*, as listed in Appendix A.

#### 780 CMR 3302.0 CONSTRUCTION DOCUMENTS AND SPECIAL PERMITS

**3302.1 Temporary construction:** Before any construction operation is started, *construction documents* shall be filed with the code official showing the design and construction of all sidewalk sheds, temporary vehicular passageways, trestles, foot bridges, guard fences and other similar devices required in the operation. Approval shall be secured from the *code official* before the commencement of any work.

**3302.2 Special permits:** All special licenses and permits for the storage of materials on sidewalks and passageways, for the use of water or other public

facilities and for the storage and handling of *explosives*, shall be secured from the administrative authorities having jurisdiction.

**3302.3 Temporary encroachments:** Sidewalk sheds, underpinning and other temporary protective guards and devices shall not project beyond the *interior* and *street lot lines* except where required to insure the safety of the adjoining property and the public, subject to approval. Where necessary, the consent of the adjoining property owner shall be obtained.

#### 780 CMR 3303.0 TESTS

**3303.1 Loading:** It shall be unlawful to *load* any structure, temporary support, sidewalk bridge or sidewalk shed or any other device during the construction or demolition of any building or structure in excess of its safe working capacity as provided for in 780 CMR 16 for allowable *loads* and working stresses.

#### 780 CMR 3304.0 PROTECTION OF PUBLIC

**3304.1 General:** Wherever a building or structure is erected, *altered*, repaired, removed or demolished, the operation shall be conducted in a safe manner and suitable protection for the general public shall be provided.

**3304.2 Fences:** Every excavation or area of construction on a site located five feet (1524 mm) or less from the *street lot line* shall be enclosed with a barrier not less than six feet (1829 mm) high to prevent the entry of unauthorized persons. Where located more than five feet (1524 mm) from the *street lot line*, a barrier shall be erected where required by the code official. All barriers shall be of adequate strength to resist wind pressure as specified in 780 CMR 1611.0.

780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS  
THE MASSACHUSETTS STATE BUILDING CODE

**3304.3 Sidewalk bridge:** Wherever the ground is excavated under the sidewalk, a sidewalk bridge shall be constructed at least four feet (1219 mm) wide, or a protected walkway of equal width shall be erected in the street, provided that the required permit for such walkway is obtained from the administrative authority.

**3304.4 Sidewalk shed:** Sidewalk sheds shall be as provided for in accordance with 780 CMR 3304.4.1 through 3304.4.4 except where sidewalks are closed by the authority having jurisdiction.

**3304.4.1 Within ten feet of street lot line:** Where any building or part thereof which is located within ten feet (3048 mm) of the *street lot line* is to be erected or raised to exceed 40 feet (12192 mm) in

**3304.4.2 Within 20 feet of street lot line:** Where the building being demolished or erected is located within 20 feet (6096 mm) of the *street lot line* and is more than 40 feet (12192 mm) in *height*, exterior flare fans or catch platforms shall be erected at vertical intervals of not more than two stories.

**3304.4.3 Buildings higher than six stories:** Where the building being demolished or erected is more than six stories or 75 feet (22860 mm) in *height*, unless set back from the *street lot line* a distance of more than  $\frac{1}{2}$  of the height of the building, a sidewalk shed shall be provided.

**3304.4.4 Walkway:** An adequately lighted walkway at least four feet (1219 mm) wide and eight feet (2438 mm) high in the clear shall be maintained under all sidewalk sheds for pedestrians. Where ramps are required, the ramps shall conform to the provisions of 780 CMR 33 and 780 CMR 1016.0.

**3304.5 Thrust-out platforms:** Thrust-out platforms or other substitute protection in lieu of sidewalk sheds shall not be used unless approved and deemed adequate to insure the public safety. Thrust-out platforms shall not be used for the storage of materials.

*height*, or wherever a building which is more than 40 feet (12192 mm) in *height* and is within ten feet (3048 mm) of the *street lot line* is to be demolished, a sidewalk shed shall be erected and maintained for the full length of the building on all street fronts for the entire time that work is performed on the exterior of the building.

**3304.6 Watchman:** Wherever a building is being demolished, erected or *altered*, a watchman shall be employed to warn the general public when intermittent hazardous operations are conducted across the sidewalk or walkway.

## 780 CMR 3305.0 FIRE HAZARDS

**3305.1 General:** The provisions of 780 CMR and of the 527 CMR: *the Massachusetts State Board of Fire Prevention Regulations*, listed in *Appendix A* shall be strictly observed to safeguard against all fire hazards attendant upon construction operations.

**3305.2 Portable fire extinguishers:** All buildings under construction, *alteration* or demolition shall be provided with at least one portable fire extinguisher with a minimum 2-A:20-B:C rating at each *exit* on all floor levels where combustible materials have accumulated. A portable fire extinguisher with a minimum 2-A:20-B:C rating shall also be provided in every storage and construction shed. Additionally, at least one portable fire extinguisher shall be provided in accordance with the 527 CMR: *the Massachusetts State Board of Fire Prevention Regulations*, listed



780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS  
SITE WORK, DEMOLITION AND CONSTRUCTION

in *Appendix A* where special hazards, such as flammable or combustible liquid storage, exist.

**3305.2.1 Steam boilers:** All temporary or permanent high-pressure steam boilers shall be operated, or be in charge of an individual in possession of a current engineers or firemans license in accordance with the provisions of M.G.L. c. 146 and 522 CMR the Board of Boiler Rules as listed in *Appendix A*. When such boilers are located within a building or within ten feet thereof, all such boilers shall be enclosed with approved noncombustible construction.

**3305.3 Standpipes:** Standpipes required in buildings by 780 CMR 914.0 shall be installed when the work of the building progresses more than 40 feet (12192 mm) above the lowest level of fire department vehicle access. The standpipes shall be either temporary or permanent in nature, and with or without a water supply, provided that such standpipes conform to the requirements of 780 CMR 914.0 as to number of risers, capacity, outlets and materials. Access from the street to such standpipes shall be maintained at all times.

**3305.3.1 Height:** The standpipe system shall be carried up with each floor and shall be installed and ready for use as each floor progresses. Standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

**3305.3.2 Outlets:** Hose outlets shall be provided with caps and attachment chains.

**3307.2 Removal of dust:** Dust, sand blasts or other harmful agents which are used or which occur in construction operations shall be disposed of at or near the point of origin to prevent diffusion over adjoining premises or streets.

**3305.3.3 Fire department connections:** For each temporary or permanent standpipe installation, there shall be provided, at the street level, one or more two-way fire department inlet connections. Access shall be provided to fire department inlet connections at all times, and such connections shall be prominently marked (see 780 CMR 915.8).

**3305.3.4 Buildings under demolition:** Where a building is being demolished and a standpipe is existing within such a building, such standpipe shall be maintained in an operable condition so as to be available for use by the fire department. Such standpipe shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.

**780 CMR 3306.0 MAINTENANCE**

**3306.1 General:** It shall be unlawful to remove or render inoperative any structural, fire protection or sanitary safeguard or device herein required except where necessary for the actual installation and prosecution of the work.

**780 CMR 3307.0 HEALTH HAZARDS**

**3307.1 General:** Every construction or maintenance operation which results in the diffusion of dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health shall be safeguarded by means of local ventilation or other protective devices to insure the safety of the public as required by the regulations of the administrative authority.

**3307.3 Protective equipment:** Facilities shall be provided in approved closed containers for housing the necessary vision, respiratory and protective equipment required in welding operations, and in accordance with the regulations of the administrative authority.

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THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR 3308.0 PROTECTION OF  
ADJOINING PROPERTY**

**3308.1 General:** Adjoining property shall be completely protected from any damage caused by the construction of a structure when the owner of the adjoining property permits free access to the structure at all reasonable times to provide the necessary safeguards in accordance with 780 CMR 3310.0.

**780 CMR 3309.0 EXISTING BUILDINGS**

**3309.1 Protection:** All adjoining public and private property shall be protected from damage caused by construction.

**3309.2 Chimney, soil and vent stacks:** Wherever a new building or structure is erected to greater or lesser heights than an adjoining building, the construction and extension of new or existing chimneys shall conform to the provisions of the mechanical code listed in *Appendix A*, and the construction and extension of soil and vent stacks and the location of window openings shall comply with the provisions of *248 CMR*.

**3309.3 Adjoining walls:** The owner of the new or altered structure shall preserve all adjoining independent and party walls from damage as provided for herein. The owner shall underpin where necessary and support the adjoining building or structure by proper foundations to comply with 780 CMR 3310.0.

**3309.3.1 Maintenance:** In case an existing party wall is intended to be used by the person who causes an excavation to be made, and such party wall is in good condition and sufficient for the use of both the existing and proposed building, such person shall preserve the party wall from injury and shall support the party wall by proper foundations at said person's own expense, so that the wall is and remains as safe and useful as the

party wall was before the excavation was commenced. During the demolition, the party wall shall be maintained weatherproof and structurally safe by adequate bracing until such time as the permanent structural supports have been provided.

**3309.3.2 Beam holes:** Where a structure involving a party wall is being demolished, the owner of the demolished structure shall, at his or her own expense, bend over all wall anchors at the beam ends of the standing wall and shall brick up all open beam holes and otherwise maintain the safety and usefulness of the wall.

**3309.3.3 Party wall exits:** A party wall balcony or horizontal exit shall not be destroyed unless and until a substitute means of egress has been provided and approved.

**3309.4 Adjoining roofs:** Where a new building or demolition of an existing building is being conducted at a greater height, the roof, roof outlets and roof structures of adjoining buildings shall be protected against damage with adequate safeguards by the person doing the work.

**780 CMR 3310.0 DEMOLITION AND  
EXCAVATION**

**3310.1 Notice of intent:** The person intending to cause a demolition or an excavation shall deliver written notice of such intent to the owner of each potentially affected adjoining lot, building or structure at least one week prior to the commencement of work. The notice shall request license to enter the potentially affected lot, building or structure prior to the commencement of work and at reasonable intervals during the work to inspect and preserve the lot, building or structure from damage.

**3310.2 Protection of adjoining property:** If afforded the necessary license to enter the adjoining lot, building or structure, the person causing the demolition or excavation to be made shall at all times

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SITE WORK, DEMOLITION AND CONSTRUCTION

and at his or her own expense preserve and protect the lot, building or structure from damage or injury. If the necessary license is not afforded, it shall be the duty of the owner of the adjoining lot, building or structure to make safe his or her own property, for the prosecution of which said owner shall be granted the necessary license to enter the premises of the demolition or excavation.

**3310.2.1 Removal of debris:** All waste materials shall be removed in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way.

**3310.4 Grading of lot:** Where a structure has been demolished or removed and a building permit has not been approved, the vacant lot shall be filled, graded and maintained in conformity to the established elevation of the street grade at curb level nearest to the point of demolition or excavation. Provision shall be made to prevent the accumulation of water or damage to any foundations on the premises or the adjoining property.

**3310.5 Utility connections:** All service utility connections shall be discontinued and capped in accordance with the *approved rules* and the requirements of the authority having jurisdiction.

**780 CMR 3311.0 RETAINING WALLS AND PARTITION FENCES**

**3311.1 General:** Where the adjoining grade is not higher than the legal level, the person causing an excavation to be made shall erect, where necessary, a retaining wall at his or her own expense and on his or her own land. Such wall shall be built to a height sufficient to retain the adjoining earth, shall be properly coped as required in 780 CMR 1825.0 and shall be provided with a guardrail or fence not less than 42 inches (1067 mm) in height.

**780 CMR 3312.0 STORAGE OF MATERIALS**

**3310.3 Notice to the code official:** If the person causing a demolition or excavation to be made is not afforded license to enter an adjoining structure, that person shall immediately notify in *writing* both the code official and the owner of the adjoining property that the responsibility of providing support to the adjoining lot building or structure has become the exclusive responsibility of the owner of the adjoining property.

**AND CONSTRUCTION EQUIPMENT**

**3312.1 General:** The term "construction equipment" shall mean the machinery, tools, derricks, hoists, scaffolds, platforms, runways, ladders and all material-handling equipment, safeguards and protective devices used in construction operations. The term "runway" shall mean an aisle or walkway constructed or maintained as a temporary passageway for pedestrians or vehicles. All construction materials and equipment required for the permitted construction shall be stored and placed so as not to endanger the public, the workers or adjoining property.

**3312.2 Design capacity:** Construction materials and equipment stored within the building, or on sidewalks or sheds, shall be placed so as not to overload any part of the construction beyond the design capacity, nor interfere with the safe prosecution of the work.

**3312.3 Pedestrian walkways:** Construction materials and equipment shall not be stored on the street without a permit issued by the administrative authority having jurisdiction. Where so stored, such materials or equipment shall not unduly interfere with vehicular traffic or the orderly travel of pedestrians on the highway or street. The piles shall be arranged to maintain a safe walkway not less than four feet (1219 mm) wide, unobstructed for its full length, and

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THE MASSACHUSETTS STATE BUILDING CODE

adequately lighted at night and at all necessary times for the use of the Public.

shall be wet down to prevent the creation of a nuisance."

**3312.4 Obstructions:** Construction materials and equipment shall not be placed or stored so as to obstruct access to fire hydrants, *standpipes*, fire or police alarm boxes, utility boxes, catch basins or manholes, nor shall such material and equipment be located within 20 feet (6096 mm) of a street intersection, or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

**780 CMR 3313.0 REMOVAL OF WASTE MATERIAL**

**3313.1 General:** Material shall not be dropped by gravity or thrown outside the exterior walls of a building during demolition or erection. Wood or metal chutes shall be provided for the removal of h materials. Where the removal of any material will cause an excessive amount of dust, such material

**780 CMR 3314.0 STAIRWAYS**

**3314.1 Temporary stairways:** Where a building has been constructed to a *height* greater than 50 feet (15240 mm) or four stories, or where an existing building exceeding 50 feet (15240 mm) in *height* is *altered*, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.

**780 CMR 3315.0 LIGHTING**

**3315.1 General:** All *stairways* and parts of buildings under demolition, erection or repair shall be adequately lighted while persons are engaged at work, in accordance with the provisions of 780 CMR 1024.0 and 527 CMR 12.00.

Inspections Division

DEPARTMENT OF COMMUNITY SAFETY



Town of Arlington  
MASSACHUSETTS  
02476

51 GROVE STREET  
TELEPHONE (781) 316-3390

Demolition

I certify that all our utilities concerning or connected to building(s) located at \_\_\_\_\_, Arlington, Massachusetts have been removed and in no way hinder any demolition process.

Gas Company  
Signature \_\_\_\_\_  
Title \_\_\_\_\_

Electric Company  
Signature \_\_\_\_\_  
Title \_\_\_\_\_

Telephone Company  
Signature \_\_\_\_\_  
Title \_\_\_\_\_

Public Works  
Signature \_\_\_\_\_  
Title \_\_\_\_\_

Cable TV Systems  
Signature \_\_\_\_\_  
Title \_\_\_\_\_

I have been notified of the demolition that is to occur at \_\_\_\_\_ on or about \_\_\_\_\_

Director of Fire Services  
Director of Police Services  
Director of Board of Health

Submitted by: name \_\_\_\_\_  
address \_\_\_\_\_

company \_\_\_\_\_

December 13, 2004

EA Fish Associates  
65 Allerton Street  
Boston, MA 02119

Attention: Patrick McMahon, Assistant Project Director

**Reference:** Hazardous Materials Consulting  
Symmes Hospital Campus Buildings  
Demolition/Renovation, Arlington, MA  
Diversified Environmental Corp. Proposal No. 04-93R

Dear Mr. McMahon:

Diversified Environmental Corporation, DEC, is pleased to submit this proposal for costs associated with hazardous materials consulting services in connection with the upcoming demolition/renovation of the Symmes Hospital Campus in Arlington, MA. Having completed numerous projects of similar scope and requirements as well as having completed a detailed walkthrough of the campus on 11/08/04 & 11/19/04, we have firsthand familiarity with your needs and requirements. Once again, we are pleased with this opportunity to be of service to EA Fish Associates on this assignment.

**This proposal covers DEC's recommended method of approach to:**

Identify the presence of asbestos-containing materials, underground storage tanks/above ground storage tanks (UST / AST), PCB's in light ballasts, florescent light tubes, stored chemicals, mold, pigeon guano and lead-based paint associated with the buildings.

Develop detailed abatement specifications for the buildings scheduled for demolition/renovation and to perform on-site monitoring and testing during abatement activities.

Outline our recommended scope of work in order to provide liability protection, flexibility in planning and decision making, and over all attainment of hazardous materials abatement objectives. In the implementation of this assignment, DEC proposes to utilize the following method of approach:

## PHASE I - HAZARDOUS MATERIALS SURVEY

Asbestos testing objectives will be to provide the following:

Determine the locations, amounts, condition and types of all asbestos-containing materials within the buildings including exterior and the roof. This will include assumptions for such inaccessible and hidden items as underground piping, foundation mastic and mastic behind block. We will thoroughly review all available previous survey reports prior to our commencement of survey activities so as to be able to inform you of the number of samples required by all governing authorities for collection to complete a comprehensive formatted report with projected abatement costs.

Collect approximately 125 bulk samples from the Nurses Building as well as collect approximately 225 bulk samples from the Main Hospital Building (our survey cost estimate assumes that no prior reports comply with these requirements and warrant the collection of these numbers of samples. However, DEC will not invoice EA Fish Associates for samples not required to be analyzed in the event that prior reports may be reliable and utilized) from all locations in accordance with applicable regulations where suspect asbestos-bearing materials (ACM) are identified and returned to our laboratories for analysis by Polarized Light Microscopy (PLM) in compliance with 40 CFR 763 to determine asbestos type and percent composition.

As with all comprehensive asbestos surveys, DEC conducts sample collection in accordance with the AHERA (the Asbestos Hazard Emergency Response Act) asbestos survey requirements. Although all samples collected may not need to be analyzed, state-of-the-art bulk sampling analysis requires that a minimum number of samples are necessary to classify a suspect material as non-asbestos. *Samples not required to be analyzed will not be invoiced.*

### **Miscellaneous Hazardous Materials**

DEC will identify light ballast, tubes, mercury switches as well as other hazardous materials such as stored chemicals, mold, pigeon guano, UST/AST and transformers located in the building.

### **Lead-Based Paint Testing**

DEC will conduct on site investigations of all areas within the buildings and the exterior of the buildings for the presence of lead-based paint. X-Ray Fluorescence (XRF) will be utilized in order to penetrate all layers of paint (up to 25 layers) on all painted surfaces within the buildings and also the exterior of the buildings. If necessary, DEC shall collect Toxicity Characteristic Leaching Procedures (TCLP) samples of the painted interior and exterior various components to determine disposal requirements.

## Survey Report

Once all areas within the buildings have been inspected for the presence of asbestos, lead-based paint, light ballast, florescent tubes, stored chemicals and other suspect hazardous materials as outlined above and all tests and representative bulk samples have been analyzed, we will provide a survey report containing all laboratory results of all tests and samples and their respective locations, quantities, cost estimates for remediation and recommendations on an floor-by-floor basis assuming that all areas within the buildings will be demolished/renovated. The report will enable the EA Fish Associates to make informed decisions surrounding these materials within the buildings such as planning and budgeting projections.

## PHASE II - BID SPECIFICATIONS AND PRE-BID ACTIVITIES

DEC will develop detailed technical specifications, including marked-up drawings and bidding documents, for removal of applicable asbestos containing materials (ACM), lead-based paint, light ballast, florescent tubes, UST/AST and stored chemicals, transformers, mold and pigeon guano from all buildings identified for demolition/renovation to protect your overall interests. Specifications will spell out in detail exactly what schedules, work practices and procedures will be followed to assure that prospective asbestos abatement contractors know exactly what is expected of them and will be formatted to coordinate all trades involved with the demolition/renovation project in order to guarantee project consistency and prevent scheduling delays often encountered with "non-conforming" specification development.

Important considerations include coordination of removal schedules with demolition/renovation requirements for the buildings on an area by area basis, work area preparation and isolation, specific abatement procedures and materials to be utilized, abatement and debris removal and disposal protocols, medical surveillance procedures, emergency response, employee protection, and safe work performance assurance measures. These elements are all important ingredients in Contractor performance and control, for regulatory compliance, and for on-time, in-budget project completion.

We will also include a lead compliance specification regarding the presence of lead-based paint in the buildings and will outline the Contractors responsibility under OSHA and EPA requirements and standards as well as the proper handling and disposal of construction debris which may contain excess levels of leaded materials. These specifications should be incorporated into the owners' demolition specifications.



## **FEE SCHEDULE**

In the conduct of this assignment for the Symmes Hospital Campus Project, we will utilize the following Fee Schedule:

Project Manager, Project Designer  
Licensed Asbestos/Lead Inspector  
\*Accredited Project Monitor  
\*\*\*Air Sample Analysis (PCM)  
Bulk Sample Analysis for Asbestos Type & Content by  
Polarized Light Microscopy (PLM)  
TCLP Sample Analysis  
Roofing Contractor  
Submittal Review  
Report Preparation

\*Labor required at night, weekends, holidays, or on an overtime basis will be charged at 1.5 times the applicable rate.

\*\*Project Monitor cost includes the on-site analysis of all abatement period asbestos PCM air cassettes.

### **Phase I Costs: Nurses Building**

For your planning and budgeting purposes, total costs for implementation and completion of the Environmental Survey will approach but not exceed \$

Up to four (4) man-days of labor for a Licensed Asbestos/Lead Inspector.

The collection and analysis of up to one hundred-twenty-five (125) bulk samples (PLM's).

The collection and analysis of up to two (2) TCLP samples

Half (1/2) man-day of Roofing Contractor.

The Nurses Building report will be incorporated into Main Building report.

### **Phase II Costs: Main Nurses Building**

Costs for completion of the Hazardous Materials Abatement Specifications, include meeting with design team, will be a fixed fee of . The specifications cost includes one revision.

**Phase I Costs: Main Hospital & Medial Records Building**

For your planning and budgeting purposes, total costs for implementation and completion of the Environmental Survey will approach but not exceed " " This would include:

- Up to nine (9) man-days of labor for a Licensed Asbestos/Lead Inspector.
- The collection and analysis of up to two hundred-twenty-five (225) bulk samples (PLM's).
- The collection and analysis of up to two (2) TCLP samples
- One (1) man-day of Roofing Contractor.
- The preparation and completion of the final report.

**Phase II Costs: Main Hospital Building**

Costs for completion of the Hazardous Materials Abatement Specifications, include meeting with design team, will be a fixed fee c. " " The specifications cost includes one revision

This is an upset limit for completion of this project; not to be exceeded unless in the event of unanticipated circumstances and in no event without your express approval and authorization. Asbestos bulk samples and TCLP (if necessary) will be treated as reimburseables and will be invoiced in accordance with the above referenced fee schedule. (Samples collected but not requiring analysis will not be invoiced).

Abatement Project Management and Over-site will be invoiced in accordance with the above referenced fee schedule.

**TERMS**

Invoice will be submitted for services rendered, with payment due within thirty (30) days from date of invoice.

As an integral part of our specification completion, we will provide a list of licensed and qualified Hazardous Materials Contractors with the necessary staffing and management capabilities to complete the project in conformance with all overall project requirements as consideration. DEC will take an active role in the bid review and selection process with Caritas and will hold a detailed Pre-Bid conference with the selected Contractor to assure a thorough understanding of both the hazardous materials abatement as well as the understanding of the scheduling and coordination requirements. DEC will maintain an ongoing log of all meeting notes throughout the entire project, including all meetings held during the abatement phase of the project.

### **PHASE III - ABATEMENT PROJECT MANAGEMENT**

#### **On-Site Abatement Inspections**

Compliance Monitoring of the Contractor's adherence to applicable elements of the specifications will be conducted throughout the abatement period, to assure and document compliance with the specifications and applicable regulations. We will be authorized as your on-site agent in this regard, with any and all required authority to conduct inspections and to determine when the Contractor has completed the job consistent with the requirements of the specifications and applicable regulations.

The scope of compliance monitoring will include the following areas:

#### **Pre-Abatement Inspection**

Prior to the commencement of abatement, we will perform a thorough inspection of each containment area to guarantee the integrity of each in order to prevent contamination to adjacent areas. Pre-abatement inspection categories include such areas as Ground Fault Circuit Interruption, wall protection, floor protection, critical barrier protection, sealing of penetrations, HVAC lock-out, negative pressure attainment, warning sign postage, proper personal protection, decontamination facility construction and proper shower operation. Upon the successful completion of the pre-abatement inspection, we will issue and sign-off on the Pre-Abatement Checklist form and abatement will be allowed to commence.

#### **On-Site Abatement Inspection**

Throughout the abatement phase, Diversified will perform on-site inspection services to protect your overall interests. Logs of work practice progress and performance will be completed each time on site and will document such items as proper company and worker licensure, worker and visitor sign-in and sign-out, chronological listing of events taking place, work containment integrity maintenance, site issues, visitors to the site and waste manifesting. Inspection Monitoring Checklists will be completed so as to document the above mentioned areas as well as items such as work site barriers, negative air pressure, protective equipment, decontamination facilities and utilization and proper waste handling.

### **Final Visual and Clearance Testing**

Upon the completion of removal activities in each containment and a project monitor will complete a thorough visual clearance inspection to verify that the entire scope of work has been successfully completed. A Visual Checklist will be completed at that time and will include the observation of areas such as residual dust on floors, walls, poly sheeting, non-movable items, conduit and all other surfaces where debris may have collected during abatement. Additionally, equipment will be inspected to assure thorough cleanliness prior to its removal from the work area and the decontamination chamber will be inspected for residual dust and debris. When the final visual inspection has been successfully completed, the contractor will be instructed to encapsulate all surfaces from where ACM had been removed. The encapsulation will be allowed to dry prior to the commencement of final testing.

We will then re-enter the work space in order to perform aggressive clearance air sampling according to the Asbestos Hazard Emergency Response Act (AHERA) protocol for asbestos abatement. Fans will be placed in an upward facing direction and turned on to the "high" setting to continually agitate the air during testing. We will also walk the entire work area with a leaf blower and will direct the leaf blower at all areas so as to guarantee the thorough agitation of areas such as above ductwork, above light fixtures and in corners and crevices. High volume air intake pumps will be set up at various locations, within the work area and outside the work area perimeters. Approximately 1250-1500 liters of air will be collected on mixed cellulose ester filters from each pump. At that time, we will retrieve the samples for analysis by Phase Contrast Microscopy (PCM) as required by the AHERA regulations. If all samples fall below regulated levels for occupancy following abatement, the contractor will be allowed to tear down the containment.

### **Final Project History Report**

We will also provide a Monitoring Report for your permanent reference and legal files. This report will address asbestos-containing materials removed at the site. The report will contain an introduction to the project, a description of all activities performed on-site applicable certifications, Project Monitors' daily logs and checklists, air monitoring areas and results and all other documentation available for your permanent liability protection. Many owners consider this documentation the best form of protection available against any potential litigation or damage claims that could arise in the future.

## AUTHORIZATION

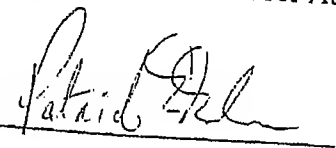
Your signature below and the return of one executed copy of this proposal will constitute your approval and authorization to proceed.

We look forward to this opportunity to be of service to you on this timely and important assignment. Please contact me or Michael Tibert Director of Technical Services if you have any questions or if we can be of additional assistance in any way. Once again, thank you for your interest in Diversified Environmental Corporation and the opportunity to be of service to EA Fish Associates.

Sincerely,  
DIVERSIFIED ENVIRONMENTAL CORPORATION

Vincent Agostino  
Director of Marketing Services

AUTHORIZED FOR EA FISH ASSOCIATES BY:

TITLE: 

DATE: 12/23/04



OFFICE OF THE BOARD OF HEALTH  
Town of Arlington

Christine M. Connolly  
Director of Public Health

27 Maple Street  
Arlington, Massachusetts 02476

Tel: 781 316-3170  
Fax: 781 316-3176

Arlington Board of Health Demolition  
Inspection Checklist

**1. ASBESTOS**

present: yes \_\_\_\_\_ no \_\_\_\_\_

Type of material present: \_\_\_\_\_

Condition of material present: \_\_\_\_\_

Will the material be removed prior to demolition or renovation: \_\_\_\_\_

by whom: \_\_\_\_\_

How will material be removed and disposed of: \_\_\_\_\_

Asbestos removal must be handled by a licensed asbestos contractor. The Department of Environmental Protection requires notification of at least 10 business days prior to asbestos removal activities. Proper disposal of asbestos material is required.

Additional Comments: \_\_\_\_\_

**2. MERCURY SWITCHES**

present: yes \_\_\_\_\_ no: \_\_\_\_\_

note: switches are commonly found in gas and oil furnaces, sump pumps, flow meters, appliances, float switches, wall thermostats

Thermostats must be disposed of through a Board of Health approved method as required by Arlington Board of Health Regulation on the Disposal of Mercury Thermostats. Failure to dispose of mercury containing thermostats properly will result in a \$200.00 fine. Thermostats and mercury containing devices be brought to the Board of Health Office, 27 Maple Street or to the Department of Public Work Office at the Town Hall and will be collected free of charge.

### 3. ABANDONED CHEMICAL

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

### 4. COOLANT GASES

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

### 5. BATTERIES

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

### 6. FUELS AND STORAGE TANKS

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Material used to heat facility: oil: \_\_\_\_\_ gas: \_\_\_\_\_ electric: \_\_\_\_\_

Additional comments: \_\_\_\_\_

### 7. HYDRAULIC FLUIDS

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ - approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

---

### 8. FLOURESCENT LIGHT TUBES

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

---

### 9. DIELECTRIC FLUIDS (BALLASTS and TRANSFORMERS)

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

---

### 11. RADIOACTIVE MATERIAL

present: yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

---

### 12. BUILDING COMPONENTS CONTAMINATED BY FORMER SITE OPERATIONS:



present:      yes: \_\_\_\_\_ no: \_\_\_\_\_

has a hazardous waste site designation been filed with the D.E.P. for this site? \_\_\_\_\_

type of material present: \_\_\_\_\_ - approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

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### 13. ADDITIONAL UNSPECIFIED CONCERNS OF MATERIALS

present:      yes: \_\_\_\_\_ no: \_\_\_\_\_

type of material present: \_\_\_\_\_ - approximate amount present: \_\_\_\_\_

how will material be removed, disposed of: \_\_\_\_\_

Additional comments: \_\_\_\_\_

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### 14. DUST CONTROL AND ANIMAL CONTROL

Method that will be used to control dust: \_\_\_\_\_

Method that will be used to control pests in area: \_\_\_\_\_

Property address to be demolished: \_\_\_\_\_

Date of demolition: \_\_\_\_\_

Company to perform work: \_\_\_\_\_

Property Owner: \_\_\_\_\_

Contact person and phone number: \_\_\_\_\_

Information is accurate and has been reviewed by a person in charge of the demolition prior to submitting this document to the Arlington Board of Health

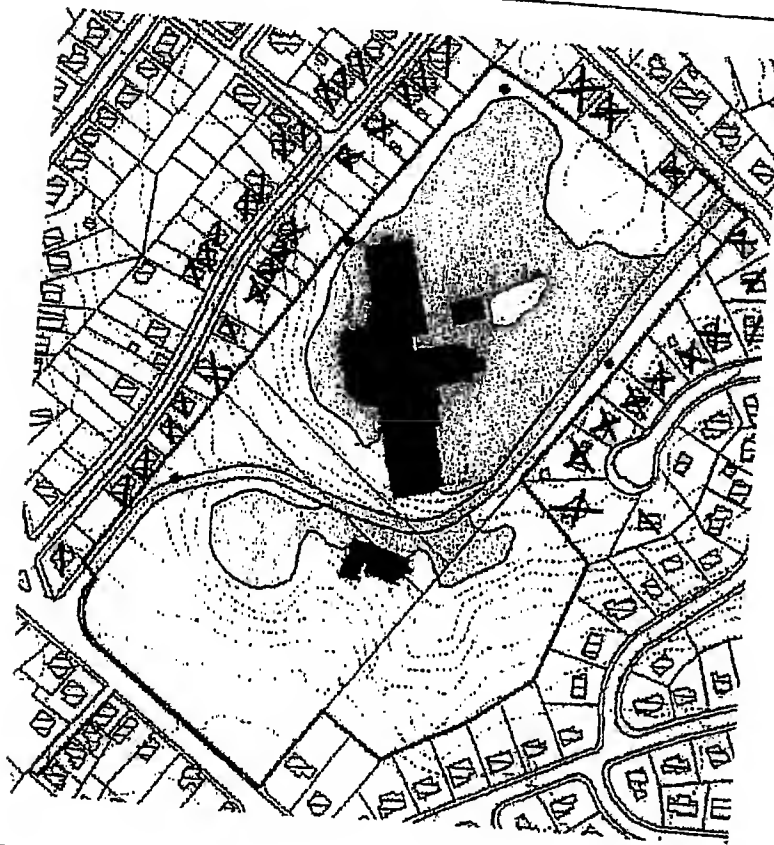
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

NT: \_\_\_\_\_

## Conceptual Preconstruction Survey & Monitoring Plan

The plan below depicts:

1. Neighboring properties on which SRA may conduct Preconstruction Surveys; and
2. Locations for monitoring of dust, noise and vibrations.



### KEY

- Exterior Survey of Property
- Interior & Exterior Survey of Property
- Monitoring Locations

Please note that this conceptual plan was developed after extensive review of how the development program might impact the neighborhood. As the program becomes further defined, SRA's engineers may recommend increasing or decreasing properties that should receive a Preconstruction Survey. Once construction activities commence, monitoring locations may change or be added if needed. These changes shall be updated on the Construction Plan.

FROM : COMMUNITY SAFETY ADMIN

FAX NO. : 781 316 3919

Dec. 01 2004 10:15AM P2



JANE SWIFT  
GOVERNOR

JAMES P. JAJUGA  
SECRETARY

*The Commonwealth of Massachusetts  
Executive Office of Public Safety  
Department of Fire Services*

P.O. Box 1025 - State Road

Flow, Massachusetts 01775

(978) 567-3100 Fax: (978) 567-3121



STEPHEN D. COAN  
STATE FIRE MARSHAL

THOMAS P. LEONARD  
DEPUTY STATE FIRE MARSHAL

## BLASTING DAMAGE COMPLAINT FORM

### PROPERTY OWNER INFORMATION

Date of Incident: \_\_\_\_\_ Time of Incident: \_\_\_\_\_ Location of Incident: \_\_\_\_\_  
Type of Structure: \_\_\_\_\_ Address of Structure: \_\_\_\_\_ (Town) \_\_\_\_\_  
Property Owner's Name: \_\_\_\_\_ (Street) \_\_\_\_\_  
Property Owner's Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
(Address, City, State, Zip)

Complainant's Name If Different: \_\_\_\_\_  
Complainant's Address If Different: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
(Address, City, State, Zip)

Did this property have a Pre-Blast Survey prior to the start of blasting? YES NO

### DESCRIPTION OF ITEM OR AREA OF ALLEGED DAMAGE

This form must be returned to the head of the fire department within 30 days of the alleged incident.)

### CERTIFICATION OF DAMAGE - PLEASE READ AND SIGN

I declare under the penalty of perjury that the statements and information provided herein are true as of the date of this complaint. I am aware that there are significant penalties for submitting false information including possible fines, civil liability and imprisonment.

Signature of Property Owner: \_\_\_\_\_ Date Signed: \_\_\_\_\_

Administrative Services • Hazardous Materials Response  
Massachusetts Firefighting Academy • 1000 State St. • Boston, MA 02118

**BLASTING COMPANY AND FIRE DEPARTMENT INFORMATION**

Name of Fire Department: \_\_\_\_\_ Address of Blast: \_\_\_\_\_  
 Name of Blasting Company Use and Handling (Permit to Blast) Issued to: \_\_\_\_\_  
 Blasting Company Phone Number: \_\_\_\_\_ Explosives User's Certificate Number: \_\_\_\_\_  
 Name of Pre-Blast Survey Company: \_\_\_\_\_ Survey Company Phone Number: \_\_\_\_\_  
 Name of Liability Insurance Carrier: \_\_\_\_\_ Insurance Carrier Phone Number: \_\_\_\_\_  
 Blaster's Name: \_\_\_\_\_ Certificate of Competency Number: \_\_\_\_\_  
 Blaster's Work Phone Number: \_\_\_\_\_  
 Blaster's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**REPORT OF FIRE DEPARTMENT INQUIRY AND VIOLATION(S) FOUND**

Were the Blasting Logs reviewed as a result of this complaint?:

YES

NO

Were violation(s) found as a result of the review of this complaint?:

YES

NO

If yes, has a Notice of Violation been issued by your department? (If yes, attach copy):

YES

NO

Signature of Fire Department Officer: \_\_\_\_\_

Date: \_\_\_\_\_

*Send copies of this form, blasting log(s), seismograph record(s) and Notice(s) of Violation to the  
 Office of the State Fire Marshal.*

**7 CMR 13.09 (13): Blasting Damage Complaint**

Any person or firm alleging damage as a result of blasting operations shall make a complaint on a "Blasting Damage Complaint" form approved by the Marshal and obtained from the local fire department of the city or town where damage occurred. The Complaint shall contain a signed certification. Completed complaint forms shall be returned within 30 days of blasting incident to the head of the fire department concerned. The head of the local fire department upon receiving a Blasting Damage Complaint form shall cause the holder of the "Explosives Users Certificate" [Own and Possess] and the blaster in charge, to report to the local fire department with copies of pertinent blasters' logs for the dates in question and to provide copies of the blaster's log for the dates alleged. The blaster in charge shall be interviewed and blast logs examined to determine any violations of 527 CMR 13.00. The local fire department authority shall record the results of his inquiry on the Blasting Damage Complaint Form. The head of the fire department shall retain the original of the complaint form and forward a copy to the Marshal's Office. The holder of the Explosives Users Certificate [Own and Possess] shall receive a copy of the complaint form and acknowledge receipt by signature and date in the space provided on the complaint form. Holder of the Explosives Users Certificate or the holder's insurance carrier shall respond to the claimant within 30 days of the date that the holder received the complaint form.

REGULATORY AUTHORITY: 527 CMR 13.00; M.G.L. c.148 §§ 9, 10, 16 and 35.



**McPHAIL ASSOCIATES, INC.**  
CONSULTING GEOTECHNICAL ENGINEERS  
30 NORFOLK STREET, CAMBRIDGE, MA 02139  
TEL: (617) 868-1420  
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[www.mcphailgeo.com](http://www.mcphailgeo.com)

## Memorandum

**DATE:** May 4, 2005

**TO:** Patrick McMahon  
E. A. Fish Associates, LLC

**FROM:** Chris M. Erikson, P.E.  
McPhail Associates, Inc.

**REFERENCE:** Anticipated Vibration Levels  
Symmes Arlington Development; Arlington, MA

As requested, attached are Figures from a technical publication. Figure 2 presents a typical range of vibrations associated with blasting. The vertical axis represents the vibration level measured in peak ground particle velocity (inches per second). Thus, "typical" vibrations from blasting range from about 0.02 ips to 3.0 ips. The horizontal axis provides the relationship of the distance from the blast and the amount (weight) of explosives used. Essentially, the downward trend of the data shown (from the upper left to the lower right) represents the reduction in vibration level as the distance from the source of the blast is increased and/or the amount of explosives used are reduced. Intuitively, this makes sense.

The vertical axis of the attached Figure 3 provides a relationship between vibration level or peak particle velocity (PPV) and human perception of those vibrations. For example, a strongly perceptible vibration would range from about 0.85 ips to 2.4 ips.

Finally, I have combined the two figures on the last attachment. This figure relates typical blasting levels with human perception of the vibrations. As indicated on the figure, "typical" blasting levels are anticipated to range from "barely perceptible" to "strongly perceptible." The important thing to note is that the level of vibration can be controlled based on the distance from the source of the blast and the amount of explosives used (as indicated in Figure 1).

Therefore, based on these relationships and our knowledge of the geology of the Symmes project site, the level of vibrations should be able to be controlled to within the "barely perceptible" level. Our on-site monitoring during the site blasting operations will allow the measurement of actual vibrations and permit adjustments to the Contractor's blasting procedures to be made, as necessary, to minimize vibration levels to within the limits required by the Contract Documents.

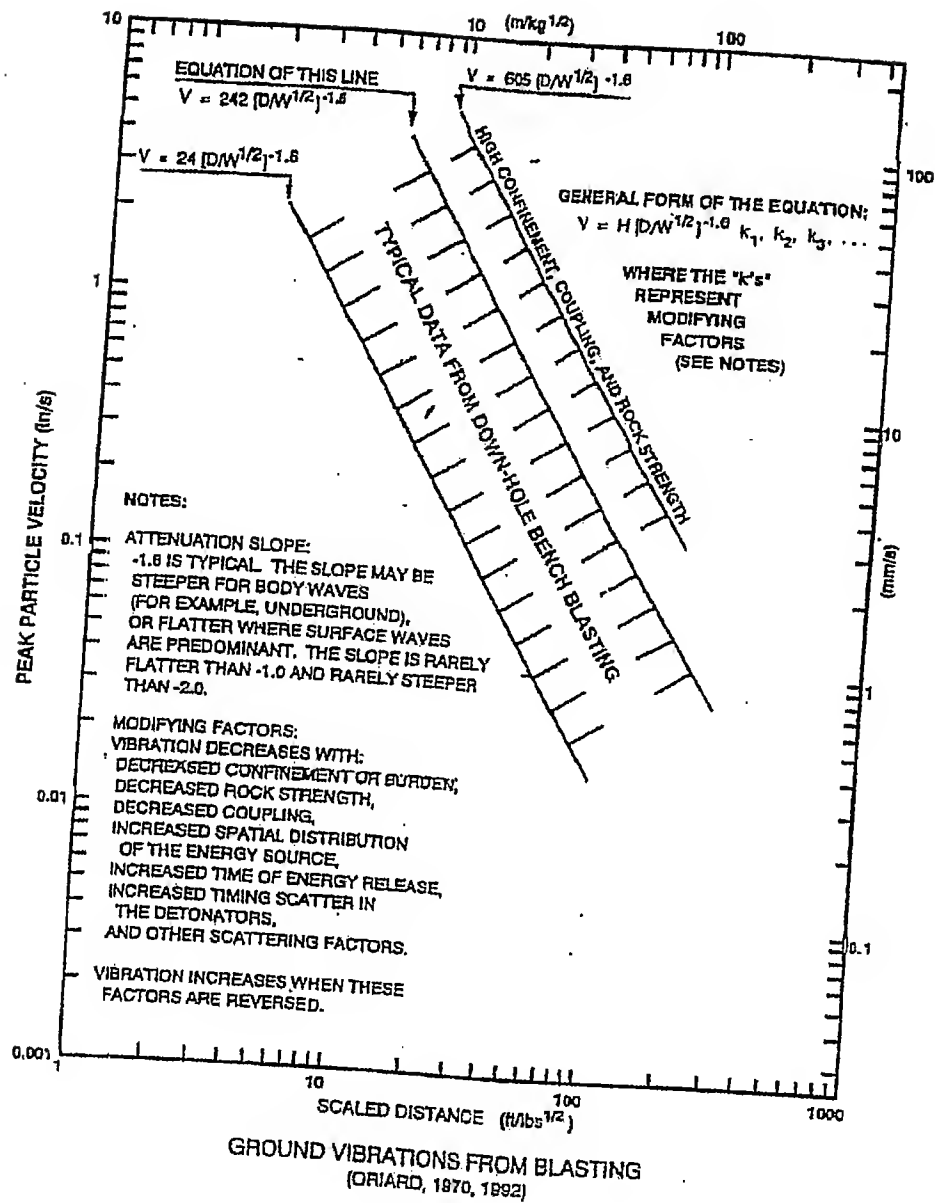


Figure 2: Attenuation of Ground Vibrations from Blasting  
(Courtesy of International Society of Explosive Engineers)

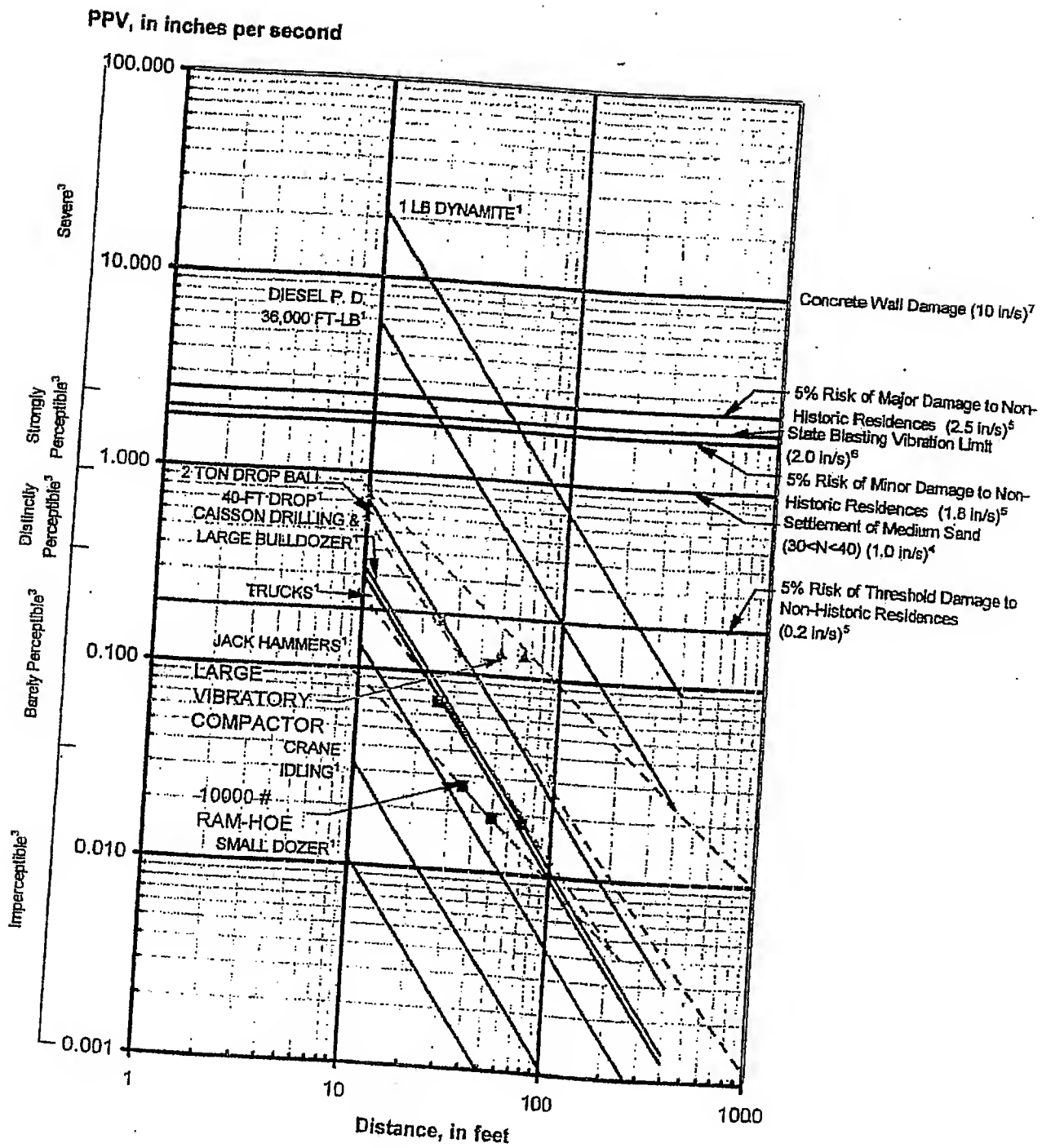
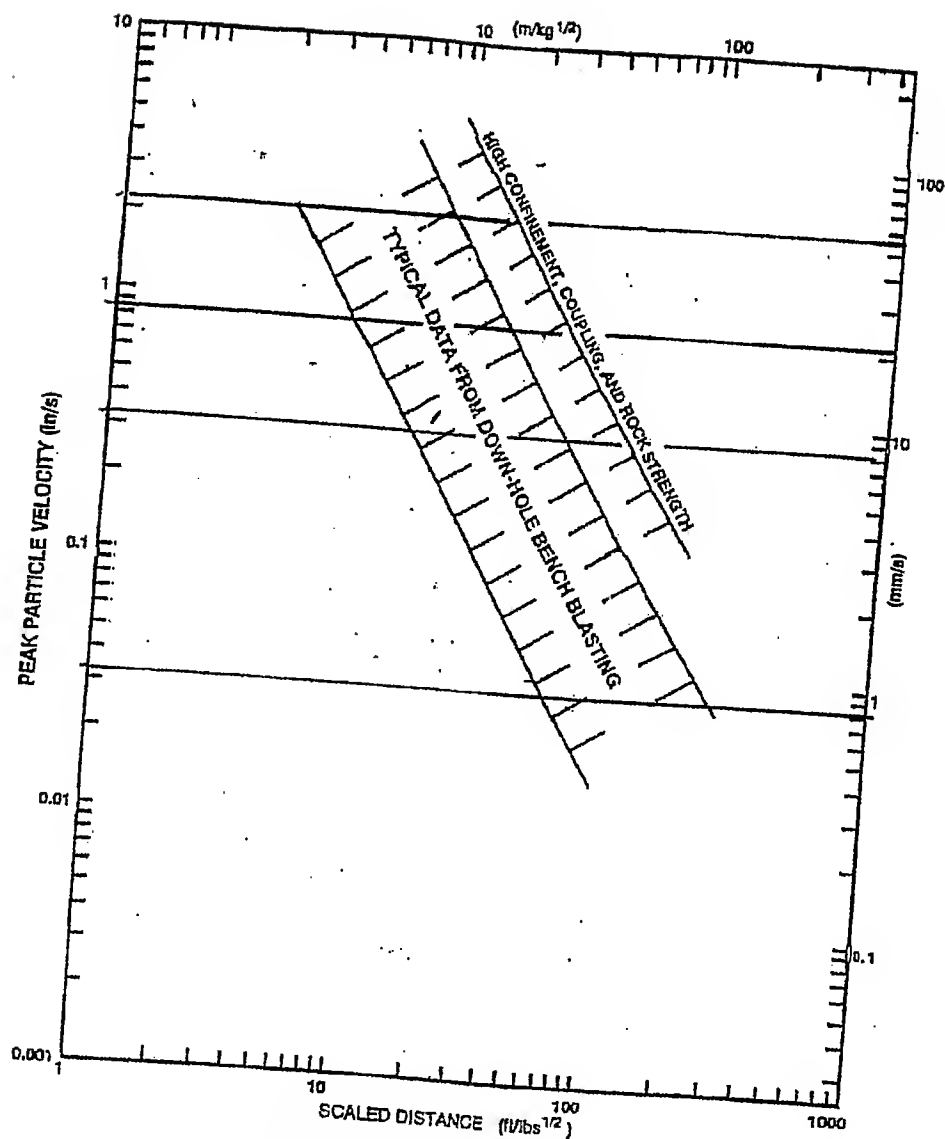
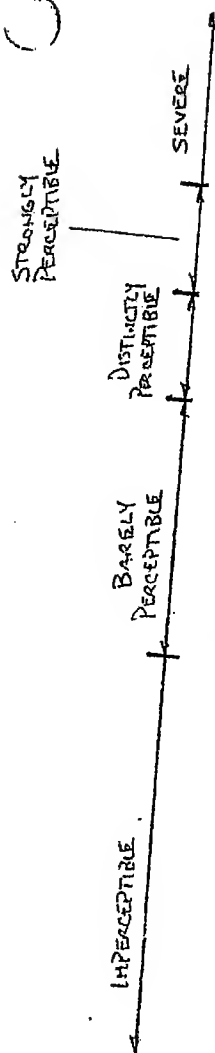


Figure 3: Ground Vibrations from Various Construction Equipment



GROUND VIBRATIONS FROM BLASTING  
(ORIARD, 1970, 1992)

COMBINED FIGURES 213



Acentech Incorporated  
33 Moulton Street  
Cambridge, MA 02138

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Facsimile: 617-499-8074  
E-mail: [postbox@acentech.com](mailto:postbox@acentech.com)

**Acentech**

April 11, 2005

Patrick McMahon  
E.A. Fish Associates  
65 Allerton Street  
Boston, MA 02119

Re: Symmes Redevelopment Project Construction Noise Analysis  
Arlington, MA  
Acentech Project Number 618288

Dear Mr. McMahon:

As you requested, we have performed a detailed analysis to determine the potential for noise impacts on sensitive uses near the construction site for the Symmes Redevelopment Project in Arlington, MA. This analysis is summarized below.

#### Plans for the Project

This project is planned to be performed in 5 phases, but the actual construction schedule has not been established yet. Different construction operations will be performed in each phase and, therefore, different noise characteristics can be expected from each phase. Table 1 summarizes the construction phases planned for this project along with the loudest expected equipment to be used during each phase. Table 2 lists the range of noise levels that can be expected 50 feet from each of the planned pieces of equipment. Construction activities are planned to occur between 7:00 AM and 6:00 PM on weekdays and possibly on Saturdays between 8:00 AM and 4:00 PM.

There are many noise-sensitive locations directly abutting the project site and within 200 feet of the construction activities, with a residential community surrounding the site. During our site visit on March 23, 2005, I found that this is a densely-populated suburban residential area with background sound levels typical of that kind of environment. The site is generally on a higher elevation than the surrounding community.

#### Allowable Noise Levels

The relevant noise limits for this project are published in Article 12 of the Town of Arlington's By-Laws. Although this section of the Town Code is entitled "Noise Abatement," it does not offer specific noise level limits and only restricts the hours of non-emergency construction activities to 7:00 AM to 8:00 PM on weekdays and 8:00 AM to 8:00 PM on weekends.

**Table 1. Planned Construction Activities and Associated Equipment**

Phase	Location	Activities	Equipment <sup>2</sup>
Residential 1	Upper site	Environmental remediation, demolition of hospital building	Backhoe, crane, jackhammer, trucks
	Entire site	Sitework, excavation, blasting, rock processing, grading, stockpiling	Backhoe, vibratory hammers, hoe-ram, rock processor, blasting charges, trucks
	Beginning across from Grove St. on Summer St. and running to the upper site	Gas, sanitary, and storm utilities	Backhoe, compressors, vibratory hammers, trucks
	Upper site	Foundations for Buildings 3 & 4	Concrete pump, cherry picker, vibratory hammers, jackhammers, trucks
Residential 2	Upper site	Buildings 3 & 4 construction - steel erection, building shell and interior work	Cranes, stud welders, steel guns, gas welders, trucks, jackhammers, generator
	Upper site	Foundations for Building 2	Concrete pump, cherry picker, vibratory hammers, jackhammers, trucks
	Upper site (across from Vista Park)	Associated townhouses with Buildings 3 & 4 - construction	Crane, trucks
	Upper site	Buildings 3 & 4 - building shell, interior work, punch list	Crane, trucks
Residential 3	Upper site	Building 2 construction - steel erection, building shell, interior work	Cranes, stud welders, steel guns, gas welders, trucks, jackhammers, generator
	Upper site (across from Vista Park)	Associated townhouses with Buildings 3 & 4 - interior work, punch list	None
	Upper site (across from Woodside Lane)	Townhouses on upper site - construction	Crane, concrete pumps, trucks
	Lower site	Building 2 punch list	None
Residential 4	Upper site	All townhouses - interior work & punch list	None
	Entire site	Vista Park construction & landscaping	Trucks, asphalt spreader
	Existing parking lot adjacent to Old Nurse's Building	Parking garage - grading, ledge removal, construction, paving	Backhoe, vibratory hammers, hoe-ram, trucks
	Old Nurse's Building	Renovation of the existing building & expansion of shell in the back	Cranes, trucks
Medical Office Building	Old Nurse's Building	Landscaping	Trucks, asphalt spreader

1 - Each phase will last approximately 6 to 8 months.

2 - The equipment listed herein has the greatest potential to generate intrusive noise levels.

*Table 2. Typical Range of Noise Levels at 50' for Planned Equipment*

Equipment	Sound Pressure Level (dBA)
Backhoe	72 - 85
Cherry picker	75 - 88
Compressor	68 - 81
Concrete pump	75 - 82
Crane	75 - 85
Gas welder	80 - 90
Generator	70 - 82
Hoe-ram	85 - 92
Jackhammer	75 - 88
Rock processor	75 - 85
Steel gun	82 - 90
Stud welder	75 - 85
Truck	70 - 91
Vibratory hammer	70 - 95

#### Potential Noise Impacts

Considering the values listed in Table 2, the background sound levels in the surrounding community, and the proximity of the residential community to the site, construction noise levels will be audible in the community. However, if this were to occur, the noise would be intermittent and last for short periods at a time (only when maximum levels are generated by the equipment). The actual noise levels at each residence would depend on the location of each piece of construction equipment on the project site.

Practical mitigation options are available that can minimize any potential community impacts. These options are listed below.

#### Practical Mitigation Options

The standard noise mitigation process involves exploring the most practical noise control options at the noise source, in its path to the listener, and at the listener. Noise control options at the source would include using the newest and quietest equipment, enclosing equipment wherever practical, installing effective mufflers on the equipment, locating the equipment as far as possible from any listeners, scheduling noisy activities at times when they would least bother people, and using custom quiet designs.

These are the most general of measures and, to the best of their abilities, the contractor will use each of these measures. Specific source noise control measures that are planned for this project include the following:

Patrick McMahon  
April 11, 2005  
Page 4

- All construction equipment will be inspected to ensure that proper mufflers are installed and fully operational. Any equipment not passing this inspection will not be used. This can reduce noise levels by up to 15 decibels.
- Temporary noise barriers will be installed wherever they are practical. This will reduce noise levels a factor of 10 to 15 decibels.
- Truck routes will be as far as possible from noise-sensitive locations. This can reduce noise levels by more than 20 decibels at some locations.
- Rock processing will not occur on weekends or on weekdays after 4:00 PM.
- Blasting will not occur on weekends or on weekdays before 8:00 AM or after 4:00 PM.

The most common noise control method used in the path between the source and listener for construction noise is erecting temporary barriers, which is already mentioned above. One difficulty with barriers is that, to be effective, they must block the line-of-sight between the sound source and a listener. An advantage of this site (for barriers) is that it stands higher in elevation than the surrounding community. Since there are no high-rise buildings in the community, this would maximize the effectiveness of any barriers erected on the site.

Options for noise control at the listener include enclosing the listener, raising background levels at the listener to mask the noise, and providing building sound insulation. Building sound insulation methods would include replacing doors and windows with more effective (in terms of noise reduction) models, sealing existing doors and windows, and adding storm windows and doors. These measures typically add up to 10 decibels of noise reduction to a building's exterior.

### Conclusions

This study has shown that the short distances between planned construction equipment and noise-sensitive locations make it likely that this project will require some mitigation design to be considered of the surrounding residential community. Even though community noise intrusions would be intermittent and infrequent, the contractor will use all practical noise reduction methods available to minimize any impacts to noise-sensitive locations.

Feel free to call me with any further questions on this matter.

Sincerely yours,

ACENTECH INCORPORATED



James P. Cowan, INCE.Bd.Cert.  
Senior Consultant

**Acentech**